



# SMART CONTRACT SECURITY AUDIT

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WATCHTOWER

# DISCLAIMER

Watchtower has completed this report to provide a summary of the Smart Contract functions, and any security, dependency or cybersecurity vulnerabilities. This is often a constrained report on our discoveries based on our investigation and understanding of the current programming versions as at the date of this report. In order to understand the full scope of our analysis, it is vital for you to review the complete report. Although we have done our best in conducting our investigation and creating this report, it is vital to note that you should not depend on this report and cannot make any claim against Watchtower or its Subsidiaries and Team members on the premise of what has or has not been included in the report. Please remember to conduct your own independent examinations before making any investment choices. We do not provide investment advice or in any way claim to determine if the project will be successful or not.

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## ABOUT THE AUDITOR:

Watchtower is an Anti-Scam Token Utility which reviews Smart Contracts and Token information to Identify Rug Pull and Honey Pot scamming activity.

Watchtowers Development Team consists of a number of Smart Contract creators, Auditors Developers and Blockchain experts.

Watchtowers Website Scanner reviews a number of Risk factors to provide an adequate Risk summary of token projects.

In Addition to this the team also helps with Creation of Smart Contracts for legitimate projects, Audits and Promotion.





# OVERVIEW

**Watchtower was commissioned by Hypercat to complete a Smart Contract audit.**

**The objective of the Audit is to achieve the following:**

- Review the Project and experience and Development team
- Ensure that the Smart Contract functions are necessary and operate as intended.
- Identify any vulnerabilities in the Smart Contract code.

**DISCLAIMER:** This Audit is intended to inform about token Contract Risks, the result does not imply an endorsement or provide financial advice in any way, All investments are made at your own risk.

(<https://www.cryptowatchtower.io/>)



# SMART CONTRACT REVIEW



Contract Created on the 12th December 2021      Solidity compiler v0.8.4

Contract name	Hypercat
Contract address	0x63f74482da0dbab7c24ed56450df46abb8fc6752
Total supply	200,000
Token ticker	HCC
Decimals	18
Token holders	3
Transactions count	30
Top 5 holders dominance	Not Launched
Tax fee	10%
Total fees	10% ~ BUY / 10% ~ SELL
Contract deployer address	0x0466c10e830af0163371d94e5d9a7c27702a071e
Contract's current owner address	0x0466c10e830af0163371d94e5d9a7c27702a071e



# Project Overview



## Project Details: (Website: <https://www.hypercatcoin.com/>)

Hypercat is a decentralised community coin that is built by an experienced team and aims to establish an innovative and sustainable long term token. We plan to combine the community-based feature of the token with a strong utility so that both the coin and the community of Hypercat can grow in an organic way. Hypercat will achieve this goal by creating a solid brand recognition along with the launch of our own play to earn game in the coming months.

### Tokenomics:

Supply: 200,000 (200 Thousand)

#### 10% Tax for Buys and Sells comprising of:

- 4% Rewards
- 2% Liquidity
- 2% Marketing
- 2% Development

### Team Review:

Watchtower reviewed a number of factors including the teams background and Cryptocurrency experience, social media interaction and availability, project momentum, token risks and community trust score.

The Hypercat team have a good understanding of Cryptocurrency and have successfully grown their community and listed on a number of coin voting sites with a good number of articles on the internet. The project has good potential.

### TEAM DOXXED/KYC:

Watchtower is not aware of the team being Doxxed.



# CONTRACT FUNCTIONS DETAILS

## Functions (Public)

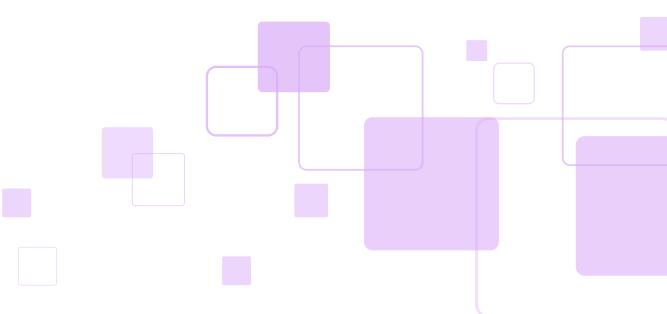
This contract has 23 available public functions which the owner can call. They can be viewed on BSC Scan.

### LINK:

<https://bscscan.com/token/0x63f74482da0dbab7c24ed56450df46abb8fc6752#writeContract>

### Function risks:

-No scam functions identified.



# Contract Stress Test

## Imported Libraries / Interfaces

- IERC20
- IERC20Metadata
- Context
- ERC20
- Ownable
- SafeMath
- Clones
- IUniswapV2Factory
- IUniswapV2Router01
- IUniswapV2Router02
- IERC20Upgradeable
- IERC20MetadataUpgradeable
- Initializable
- ContextUpgradeable
- ERC20Upgradeable
- OwnableUpgradeable
- IUniswapV2Pair
- SafeMathInt
- SafeMathUint
- IterableMapping
- DividendPayingTokenInterface
- DividendPayingToken

## Overview

1. ADDITION OF COMMENTS:	8
2. CALL STACK DEPTH ATTACK:	10
3. TIME STAMP DEPENDENCY:	10
4. PARTY MULTISIG BUG:	10
5. USE OF LIBRARIES/DEPENDENCIES (FROM TRUSTED SOURCES):	10
a. TRANSACTION-ORDERING DEPENDENCY:	10
6. ACCESS CONTROL AND AUTHORIZATION:	10
7. REENTRANCY ATTACKS:	7
8. ERC/BEP STANDARD VIOLATIONS:	10
9. USAGE OF VISIBILITY LEVELS:	6
	10



# ISSUES CHECKING STATUS



Issue description	Checking status
1. Compiler errors.	Passed
2. Race conditions and Reentrancy. Cross-function race conditions.	Passed
3. Possible delays in data delivery.	Passed
4. Oracle calls.	Passed
5. Front running.	Passed
6. Timestamp dependence.	Passed
7. Integer Overflow and Underflow.	Passed
8. DoS with Revert.	Passed
9. DoS with block gas limit.	Passed
10. Methods execution permissions.	Passed



Issue description	Checking status
11. Economy model of the contract.	Passed
12. The impact of the exchange rate on the logic.	Passed
13. Private user data leaks.	Passed
14. Malicious Event log.	Passed
15. Scoping and Declarations.	Passed
16. Uninitialized storage pointers.	Passed
17. Arithmetic accuracy.	Passed
18. Design Logic.	Passed
19. Cross-function race conditions.	Passed
20. Safe Open Zeppelin contracts implementation and usage.	Passed
21. Fallback function security.	Passed



# SECURITY ISSUES



## High Severity Issues

Nil



## Medium Severity Issues

- There is no way to pause internal swaps. This can be a problem if a migration is needed (eg. Pancakeswap V3)
- Fees can't be set to 0: If fees are set to 0 the transaction will fail because the contract will try to swap 0 tokens.



## Low Severity Issues

- Low Severity Issues:
  - Wrong Code: In `_transfer()` , the value `sellTokens` represent the tokens that get swapped for rewards but it is equal to the whole remaining balance. Instead it should be:

```
uint256 sellTokens = contractTokenBalance.mul(tokenRewardsFee).div(totalFees);
```

- Typo Error —> The contracts distributes BUSD but it mentions CAKE



# CONCLUSION



**Watchtower reviewed the Hypercat deployed and verified contract to conduct this audit.**

**Watchtower is satisfied that the contract is void of any malicious coding and that the team are operating with integrity.**

## **Watchtower Disclaimer:**

*Please check the disclaimer page and note, this Audit is intended to inform about token Contract Risks, the result does not imply an endorsement or in any way provide financial advice, please do your own research. By reading this report you accept and agree to the disclaimer and understand investments are made at your own risk.*

*(<https://www.cryptowatchtower.io/>)*

## **Contact Us**

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