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AUDIT COMPANY

# Smart Contract Security Audit

TechRate

November, 2021

# Audit Details

Audited project

**SuperMegaHyperDoge**

Deployer address

**0x282ea107d2a28e4986d9d3ec235a4962609c0caf**

Client contacts:

**SuperMegaHyperDoge team**

Blockchain

**Ethereum**

Project website:

**Not provided**

# Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

# Background

## TechRate was commissioned by SuperMegaHyperDoge to perform an audit of smart contracts:

https://etherscan.io/address/0xceb5c3f00f3165b915fc078e8947ee8bbc5c1271#code

## The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

# Contracts Details

## Token contract details for 26.11.2021

| | |
|---|---|
| Contract name | SuperMegaHyperDoge |
| Contract address | 0xCEB5c3F00F3165B915fC078e8947Ee8BbC5c1271 |
| Total supply | 4,200,000,000 |
| Token ticker | SMHDoge |
| Decimals | 4 |
| Token holders | 1 |
| Transactions count | 1 |
| Top 100 holders dominance | 100.00% |
| Autoliquidity receiver | 0xf7c7db6978050b757214a6e7eebcb122f798647a |
| Marketing fee receiver | 0xf7c7db6978050b757214a6e7eebcb122f798647a |
| Total fee | 10 |
| pair | 0x21ff33ac44a8037ee44850d58a728510fdf98b32 |
| Contract deployer address | 0x282ea107d2a28e4986d9d3ec235a4962609c0caf |
| Contract's current owner address | 0x282ea107d2a28e4986d9d3ec235a4962609c0caf |

# SuperMegaHyperDoge Token Distribution

The top 100 holders collectively own 100.00% (4,200,000,000.00 Tokens) of SuperMegaHyperDoge

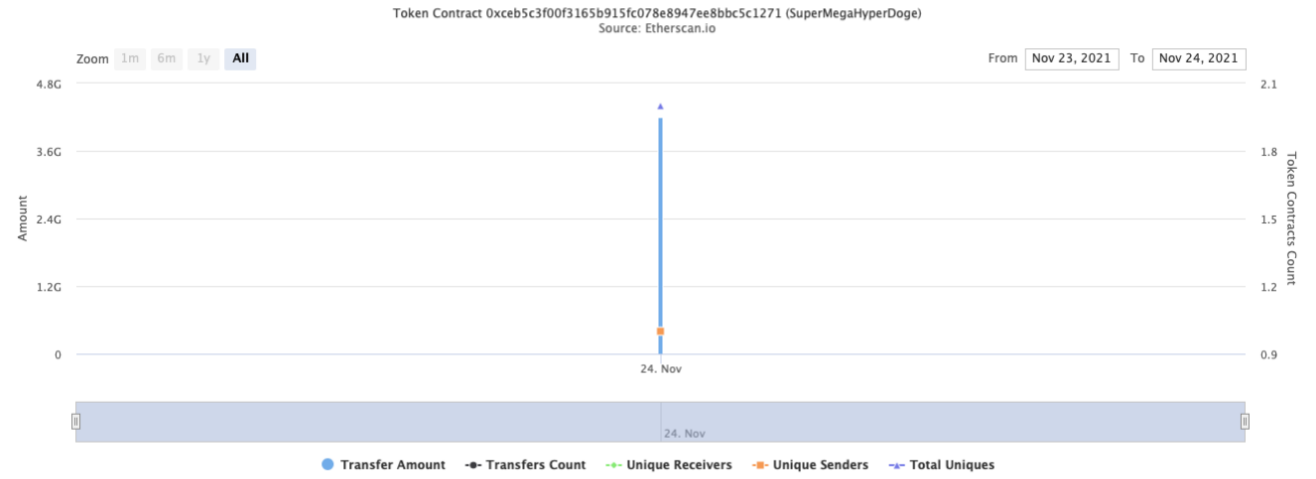
Token Total Supply: 4,200,000,000.00 Token | Total Token Holders: 1


(A total of 4,200,000,000.00 tokens held by the top 100 accounts from the total supply of 4,200,000,000.00 token)

# SuperMegaHyperDoge Contract Interaction Details

Time Series: Token Contract Overview

Wed 24, Nov 2021 - Wed 24, Nov 2021



# SuperMegaHyperDoge Top 10 Token Holders

| Rank | Address | Quantity (Token) | Percentage |
|---|---|---|---|
| 1 | 0x282ea107d2a28e4986d9d3ec235a4962609c0caf | 4,200,000,000 | 100.0000% |

# Contract functions details

+ [Lib] SafeMath
  - [Int] add
  - [Int] sub
  - [Int] sub
  - [Int] mul
  - [Int] div
  - [Int] div

+ [Int] IBEP20
  - [Ext] totalSupply
  - [Ext] decimals
  - [Ext] symbol
  - [Ext] name
  - [Ext] getOwner
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #

+ Auth
  - [Pub] <Constructor> #
  - [Pub] authorize #
    - modifiers: onlyOwner
  - [Pub] unauthorize #
    - modifiers: onlyOwner
  - [Pub] isOwner
  - [Pub] isAuthorized
  - [Pub] transferOwnership #
    - modifiers: onlyOwner

+ [Int] IDEXFactory
  - [Ext] createPair #

+ [Int] IDEXRouter
  - [Ext] factory
  - [Ext] WETH
  - [Ext] addLiquidity #
  - [Ext] addLiquidityETH ($)
  - [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
  - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens ($)
  - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #

+ [Int] IDividendDistributor
  - [Ext] setDistributionCriteria #
  - [Ext] setShare #
  - [Ext] deposit ($)
  - [Ext] process #

+ DividendDistributor (IDividendDistributor)
  - [Pub] <Constructor> #

- [Ext] setDistributionCriteria #
  - modifiers: onlyToken
- [Ext] setShare #
  - modifiers: onlyToken
- [Ext] deposit ($)
  - modifiers: onlyToken
- [Ext] process #
  - modifiers: onlyToken
- [Int] shouldDistribute
- [Int] distributeDividend #
- [Ext] claimDividend #
- [Pub] getUnpaidEarnings
- [Int] getCumulativeDividends
- [Int] addShareholder #
- [Int] removeShareholder #

+ SuperMegaHyperDoge (IBEP20, Auth)
  - [Pub] <Constructor> #
    - modifiers: Auth
  - [Ext] <Fallback> ($)
  - [Ext] totalSupply
  - [Ext] decimals
  - [Ext] symbol
  - [Ext] name
  - [Ext] getOwner
  - [Pub] balanceOf
  - [Ext] allowance
  - [Pub] approve #
  - [Ext] approveMax #
  - [Ext] transfer #
  - [Ext] transferFrom #
  - [Ext] setMaxWalletPercent_base1000 #
    - modifiers: onlyOwner
  - [Ext] setMaxTxPercent_base1000 #
    - modifiers: onlyOwner
  - [Ext] setTxLimit #
    - modifiers: authorized
  - [Int] _transferFrom #
  - [Int] _basicTransfer #
  - [Int] checkTxLimit
  - [Int] shouldTakeFee
  - [Int] takeFee #
  - [Int] shouldSwapBack
  - [Ext] clearStuckBalance #
    - modifiers: authorized
  - [Ext] clearStuckBalance_sender #
    - modifiers: authorized
  - [Ext] set_sell_multiplier #
    - modifiers: onlyOwner
  - [Pub] tradingStatus #
    - modifiers: onlyOwner
  - [Pub] cooldownEnabled #
    - modifiers: onlyOwner
  - [Int] swapBack #
    - modifiers: swapping

- [Ext] setIsDividendExempt #
  - modifiers: authorized
- [Pub] enable_blacklist #
  - modifiers: onlyOwner
- [Pub] manage_blacklist #
  - modifiers: onlyOwner
- [Ext] setIsFeeExempt #
  - modifiers: authorized
- [Ext] setIsTxLimitExempt #
  - modifiers: authorized
- [Ext] setIsTimelockExempt #
  - modifiers: authorized
- [Ext] setFees #
  - modifiers: authorized
- [Ext] setFeeReceivers #
  - modifiers: authorized
- [Ext] setSwapBackSettings #
  - modifiers: authorized
- [Ext] setTargetLiquidity #
  - modifiers: authorized
- [Ext] setDistributionCriteria #
  - modifiers: authorized
- [Ext] setDistributorSettings #
  - modifiers: authorized
- [Pub] getCirculatingSupply
- [Pub] getLiquidityBacking
- [Pub] isOverLiquified
- [Ext] multiTransfer #
  - modifiers: onlyOwner
- [Ext] multiTransfer_fixed #
  - modifiers: onlyOwner

($) = payable function
# = non-constant function

# 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. | Low issues |
| 10. | Methods execution permissions. | Passed |
| 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

No high severity issues found.

## Medium Severity Issues

No medium severity issues found.

## Low Severity Issues

### 1. Out of gas

Issue:

- The function `manage_blacklist()` uses the loop to change blacklist status of addresses. It also could be aborted with `OUT_OF_GAS` exception if there will be a long addresses list.

Recommendation:
Check that the array length is not too big.

## Notes:

- There Is sending token amounts to burnFeeReceiver instead of really burning (decreasing total supply).

## Owner privileges (In the period when the owner is not renounced)

- Owner can change _maxWalletToken and _maxTxAmount.
- Owner can change sellMultiplier.
- Owner can change trading.
- Owner can change blacklist mode.
- Owner can change maxRoomRent value.
- Owner can change cooldown settings.
- Owner can multiTransfer fixed and listed token amounts.
- Authorized addresses can withdraw contract BNBs.
- Authorized addresses can include in and exclude from dividends.
- Authorized addresses can include in and exclude from fee, timelock and transaction amount.
- Authorized addresses can change fees.
- Authorized addresses can change fee receivers.
- Authorized addresses can change swap threshold and disable/enable swap.
- Authorized addresses can change targetLiquidity.
- Authorized addresses can change distribution criteria.
- Authorized addresses can change distribution GAS.

# Conclusion

**Smart contracts contain low severity issues! Liquidity pair contract's security is not checked due to out of scope.**

**Liquidity locking details are NOT provided by the team.**

***TechRate note:***

***Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.***