



Full Audit Report

Dogens Security Assessment



SECURI LAB contact@securi-lab.com



FULL AUDIT REPORT

Table of Contents	1
Report Information	2
Disclaimer	3
Executive Summary	4
NVD CVSS Scoring	
Audit Result	
Project Introduction Scope Information Audit Information Audit Version History Initial Audit Scope	5
·	
Risk Rating Vulnerability Severity Summary Vulnerability Findings SWC & SEC-01 to SEC-06 Consultation	7 8 9 10-16
SWC FIndings	17-19
Visibility, Mutability, Modifier function testing	20-29
Component, Exposed Function	
StateVariables, Capabilities, Contract Descripton Table	
Inheritate Function Relation Graph	30-31
UML Diagram & UML Storage	32
About Securi	33

Page 1 of 33



FULL AUDIT REPORT

Report Information

1100011111011110	<u></u>
About Report	Dogens Security Assessment
Version	v1.3
Client	Dogens
Language	Solidity
Confidentiality	Public
Platform	Ethereum Chain
Contract Address	0x1b4dD5eA240732dDAc8d74FD1Cd9026Addc02e3c
	J L. / 4
Audit Method	Whitebox LAB
C	vbersecurity Audit KYC Consultant
* ^ d:+ ^ / a+b a d	, a contract of the contract o

*Audit Method

Whitebox: Securi Team receives all source code from the client to provide the assessment. Securi Team receives only bytecode from the client to provide the assessment.

Digital Sign (Only Full Audit Report)







FULL AUDIT REPORT

Disclaimer

Regarding this security assessment, there are no guarantees about the security of the program instruction received from the client is hereinafter referred to as **"Source code"**.

And **SECURI Lab** hereinafter referred to as "**Service Provider**", the **Service Provider** will not be held liable for any legal liability arising from errors in the security assessment. The responsibility will be the responsibility of the **Client**, hereinafter referred to as "**Service User**" and the **Service User** agrees not to be held liable to the **service provider** in any case. By contract **Service Provider** to conduct security assessments with integrity with professional ethics, and transparency to deliver security assessments to users The **Service Provider** has the right to postpone the delivery of the security assessment. If the security assessment is delayed whether caused by any reason and is not responsible for any delayed security assessments. If **the service provider** finds a vulnerability The **service provider** will notify the **service user** via the Preliminary Report, which will be kept confidential for security. The **service provider** disclaims responsibility in the event of any attacks occurring whether before conducting a

Security Assessment Not Financial/Investment Advice Any loss arising from any investment in any project is the responsibility of the investor.

security assessment. Or happened later All responsibility shall be sole with the service user.

SECURI disclaims any liability incurred. Whether it's Rugpull, Abandonment, Soft Rugpull

The SECURI LAB team has conducted a comprehensive security assessment of the vulnerabilities. This assessment is tested with an expert assessment. Using the following test requirements

- 1. Smart Contract Testing with Expert Analysis By testing the most common and uncommon vulnerabilities.
- 2. Automated program testing It includes a sample vulnerability test and a sample of the potential vulnerabilities being used for the most frequent attacks.
- 3. Visibility, Mutability, Modifier function testing, such as whether a function can be seen in general, or whether a function can be changed and if so, who can change it.
- 4. Function association test It will be displayed through the association graph.
- 5. This safety assessment is cross-checked prior to the delivery of the assessment results.





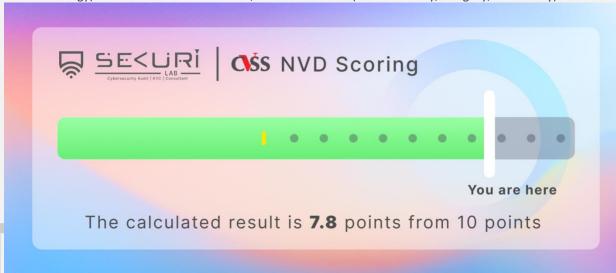
FULL AUDIT REPORT

Executive Summary

For this security assessment, SECURI LAB received a request from Dogens on Monday, December 19, 2022.

NVD CVSS Scoring

The score was calculated using the NVD (National Vulnerability Database) of NIST (National Institute of Standards and Technology) under the CVSS 3.1 standard, based on the CIA (Confidentiality, Integrity, Availability).



Audit Result

SECURI LAB evaluated the smart contract security of the project and found: [Total: 6 Issues]

Critical	High	Medium	Low	Very Low	Informational
0	1	0	2	0	3







FULL AUDIT REPORT

Project Introduction

Scope Information:

Project Name	Dogens
Website	https://dogens.io/
Chain	Ethereum Chain
Language	Solidity

Audit Information:

Request Date	Monday, December 19, 2022
Audit Date	Monday, December 19, 2022

Audit Version History:

Version	Date	Description
1.0	Monday, October 24, 2022	Preliminary Report[Dogens NFT] 0xdd2a0db3e25d0b375ea4457fb80fa4331be0f801
1.1	Monday, October 24, 2022	Full Audit Report[Dogens NFT] Oxdd2a0db3e25d0b375ea4457fb80fa4331be0f801
1.2	Monday, December 19, 2022	Preliminary Report [Dogens] 0x1b4dD5eA240732dDAc8d74FD1Cd9026Addc02e3c
1.3	Tuesday, December 20, 2022	Full Audit Report [Dogens] 0x1b4dD5eA240732dDAc8d74FD1Cd9026Addc02e3c



FULL AUDIT REPORT

Initial Audit Scope: Contract: ox1b4dD5eA240732dDAc8d74FD1Cd9026Addc02e3c

Smart Contract	0x1b4dD5eA240732dDAc8d74FD1Cd9026Addc02e3c
Contract Name	Dogens
Compiler Version	v0.8.17+commit.8df45f5f

For previously Dogens audit report please check it on https://securi-lab.com/our-case/dogen-nft/







FULL AUDIT REPORT

Security Assessment Procedure

Securi has the following procedures and regulations for conducting security assessments:

- **1.Request Audit** Client submits a form request through the Securi channel. After receiving the request, Securi will discuss a security assessment. And drafting a contract and agreeing to sign a contract together with the Client
- **2.Auditing** Securi performs security assessments of smart contracts obtained through automated analysis and expert manual audits.
- **3.Preliminary Report** At this stage, Securi will deliver an initial security assessment. To report on vulnerabilities and errors found under Audit Scope will not publish preliminary reports for safety.
- **4.Reassessment** After Securi has delivered the Preliminary Report to the Client, Securi will track the status of the vulnerability or error, which will be published to the Final Report at a later date with the following statuses:
 - **a.Acknowledge** The client has been informed about errors or vulnerabilities from the security assessment.
 - **b.Resolved** The client has resolved the error or vulnerability. Resolved is probably just a commit, and Securi is unable to verify that the resolved has been implemented or not.
- c.Decline Client has rejected the results of the security assessment on the issue.5.Final Report Securi providing full security assessment report and public







FULL AUDIT REPORT

Risk Rating

Risk rating using this commonly defined: $Risk \ rating = impact * confidence$

Impact The severity and potential impact of an attacker attack

Confidence Ensuring that attackers expose and use this vulnerability

Both have a total of 3 levels: **High, Medium, Low**. By *Informational* will not be classified as a

level

Confidence			
Confidence Impact	Low	Medium	High
Low	Very Low	Low	Medium
Medium	Low	Medium	High
High	Medium	High	Critical

Severity is a risk assessment It is calculated from the Impact and Confidence values using the following calculation methods, $Risk\ rating = impact * confidence$ It is categorized into **5 categories based** on the **lowest severity**: Very Low , Low , Medium , High , Critical . For **Informational** will not be counted as **severity**

Cybersecurity Audit | KYC | Consultant

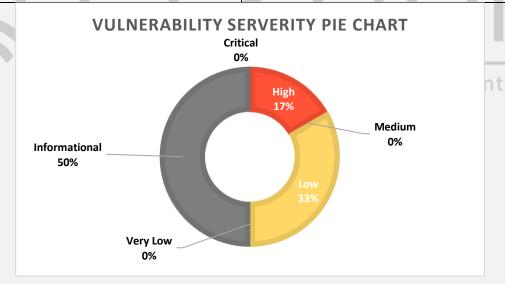




FULL AUDIT REPORT

Vulnerability Severity Summary

Vulnerability Severity Level	Total
Critical	0
High	1
Medium	0
Low	2
Very Low	0
Informational (Non severity level)	3 T







FULL AUDIT REPORT

Vulnerability Findings

	vaniciasinty i manigs				
ID	Title	Severity	Status		
SEC-01	Owner can stop transfer	High	Acknowledge		
SEC-02	Missing Events Arithmetic (events-maths)	LOW	Acknowledge		
SEC-03	Missing Zero Address Validation (missing-zero-check)	LOW	Acknowledge		
SEC-04	Conformity to Solidity naming conventions (naming-convention)	Informational	Acknowledge		
SEC-05	Unused state variables (unused-state)	Informational	Acknowledge		
SEC-06	Costly operations in a loop (costly-loop)	Informational	Acknowledge		



FULL AUDIT REPORT

SEC-01: Owner can stop transfer

Туре	Severity	Location	Status
Owner can stop transfer	High	Line: 348-350	Acknowledge

Finding:

function setCanTransfer(bool)

Recommendation:

We do not recommend having a function that can stop the transfer token.

Alleviation:

Dogens team has Acknowledge this issue







FULL AUDIT REPORT

SEC-02: Missing Events Arithmetic (events-maths)

Туре	Severity	Location	Status
Missing Events Arithmetic (events-maths)	LOW	Line: check on finding	Acknowledge

Finding:

- X Dogens.setMaxWallet(uint256) (Dogens.sol:516-518) should emit an event for:
 - maxWallet = _amount (Dogens.sol#517)
- X Dogens.setSwapAtAmount(uint256) (Dogens.sol:512-514) should emit an event for:
 - swapAtAmount = amount (Dogens.sol#513)

Recommendation:

Emit an event for critical parameter changes.

Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#missing-events-arithmetic

Cybersecurity Audit | KYC

Alleviation:

Dogens team has Acknowledge this issue



Page 12 of 33





FULL AUDIT REPORT

SEC-03: Missing Zero Address Validation (missing-zero-check)

Туре	Severity	Location	Status
Missing Zero Address Validation (missing-zero-check)	LOW	Line: check on finding	Acknowledge

Finding:

Dogens.setTreasuryAddress(address)._treasuryWallet (Dogens.sol:500) lacks a zero-check on :

treasuryWallet = address(treasuryWallet) (Dogens.sol#501)

Recommendation:

Check that the address is not zero.

Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#missing-zero-address-validation

Alleviation:		_ L A	\B
Dogens team has Acknowledge this issue	Audit K	YCIC	Consultant



Page 13 of 33





FULL AUDIT REPORT

SEC-04: Conformity to Solidity naming conventions

Туре	Severity	Location	Status
Conformity to Solidity naming conventions (naming-convention)	Informational	Line: check on finding	Acknowledge

Finding:

Constant Dogens._decimals (Dogens.sol:194) is not in UPPER_CASE_WITH_UNDERSCORES

Constant Dogens._name (Dogens.sol:192) is not in UPPER CASE WITH UNDERSCORES

Constant Dogens._symbol (Dogens.sol:193) is not in UPPER CASE WITH UNDERSCORES

Constant Dogens._tTotal (Dogens.sol:197) is not in UPPER CASE WITH UNDERSCORES

Recommendation:

Follow the Solidity [naming convention](https://solidity.readthedocs.io/en/v0.4.25/style-guide.html#naming-conventions).

Reference: https://github.com/crytic/slither/wiki/Detector-
Documentation#conformance-to-solidity-naming-conventions

Alleviation:

Dogens team has Acknowledge this issue





FULL AUDIT REPORT

Unused state variables (unused-state) SEC-05:

Туре	Severity	Location	Status
Unused state variables (unused- state)	Informational	Line: check on finding	Acknowledge

Finding:

Dogens.MAX (Dogens.sol:196) is never used in Dogens (Dogens.sol#179-588)

Recommendation:

Remove unused state variables.

Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-

state-variable

Alleviation:

Dogens team has Acknowledge this issue

Cybersecurity Audit | KYC



Page 15 of 33



FULL AUDIT REPORT

SEC-06: Costly operations in a loop (costly-loop)

Туре	Severity	Location	Status
Costly operations in a loop (costly-loop)	Informational	Line: check on finding	Acknowledge

Finding:

Dogens.pardonSniper(address) (Dogens.sol:536-546) has costly operations inside a loop:

confirmedSnipers.pop() (Dogens.sol#542)

Recommendation:

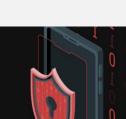
Use a local variable to hold the loop computation result.

Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#costly-operations-inside-a-loop

Alleviation: LAB

Dogens team has Acknowledge this issue







FULL AUDIT REPORT

SWC Findings

SWC Finding	ွ ၁		
ID	Title	Scanning	Result
SWC-100	Function Default Visibility	Complete	No risk
SWC-101	Integer Overflow and Underflow	Complete	No risk
SWC-102	Outdated Compiler Version	Complete	No risk
SWC-103	Floating Pragma	Complete	No risk
SWC-104	Unchecked Call Return Value	Complete	No risk
SWC-105	Unprotected Ether Withdrawal	Complete	No risk
SWC-106	Unprotected SELFDESTRUCT Instruction	Complete	No risk
SWC-107	Reentrancy rsecurity Audit	Complete Consul	tant No risk
SWC-108	State Variable Default Visibility	Complete	No risk
SWC-109	Uninitialized Storage Pointer	Complete	No risk
SWC-110	Assert Violation	Complete	No risk
SWC-111	Use of Deprecated Solidity Functions	Complete	No risk
SWC-112	Delegatecall to Untrusted Callee	Complete	No risk
SWC-113	DoS with Failed Call	Complete	No risk



SWC-114	Transaction Order Dependence	Complete	No risk
SWC-115	Authorization through tx.origin	Complete	No risk
SWC-116	Block values as a proxy for time	Complete	No risk
SWC-117	Signature Malleability	Complete	No risk
SWC-118	Incorrect Constructor Name	Complete	No risk
SWC-119	Shadowing State Variables	Complete	No risk
SWC-120	Weak Sources of Randomness from Chain Attributes	Complete	No risk
SWC-121	Missing Protection against Signature Replay Attacks	Complete	No risk
SWC-122	Lack of Proper Signature Verification	Complete Consul	No risk
SWC-123	Requirement Violation	Complete	No risk
SWC-124	Write to Arbitrary Storage Location	Complete	No risk
SWC-125	Incorrect Inheritance Order	Complete	No risk
SWC-126	Insufficient Gas Griefing	Complete	No risk
SWC-127	Arbitrary Jump with Function Type Variable	Complete	No risk
SWC-128	DoS With Block Gas Limit	Complete	No risk





FULL AUDIT REPORT

SWC-129	Typographical Error	Complete	No risk
SWC-130	Right-To-Left-Override control character (U+202E)	Complete	No risk
SWC-131	Presence of unused variables	Complete	No risk
SWC-132	Unexpected Ether balance	Complete	No risk
SWC-133	Hash Collisions With Multiple Variable Length Arguments	Complete	No risk
SWC-134	Message call with hardcoded gas amount	Complete	No risk
SWC-135	Code With No Effects	Complete	No risk
SWC-136	Unencrypted Private Data On-Chain	Complete	No risk

Cybersecurity Audit | KYC | Consultant







FULL AUDIT REPORT

Visibility, Mutability, Modifier function testing

Components

Contracts	 ELibraries	Q Interfaces	Abstract
1	2	5	2

Exposed Functions

This section lists functions that are explicitly declared public or payable. Please note that getter methods for public stateVars are not included.

⊕ Public	§ Payable
98	6

External	Internal	Private	Pure	View	
93	93	6	28	33	

StateVariables

Total	Public
24	9

Capabilities

Solidity Versions observed	Experimental Features	Can Receive Funds	Uses Assembly	Has Destroyable Contracts
^0.8.17		yes	yes (1 asm blocks)	

Page 20 of 33

ybersecurity Audit | KYC | Consultant





FULL AUDIT REPORT

Transf ers ETH	4 Low- Level Calls	Delegate Call	Uses Hash Functions	ECRecove r	New/Create/Cr eate2
yes		yes			

TryCatch	Σ Unchecked
	yes

Contracts Description Table

Contract	Туре	Bases		
L	Function Name	Visibility	Muta bility	Modifi ers
Context	Implementation			
L	_msgSender	Internal 🖺		
L	_msgData	Internal 🖺		
IERC20	Interface			
L	totalSupply	External [NO
L	balanceOf	External [NO
L	transfer	External [NO
L	allowance	External [NO[
L	approve	External [NO
L	transferFrom	External [NO
Ownable	Implementation	Context		



Contract	Туре	Bases	
L		Public [NO
L	owner	Public [NO
L	renounceOwnership	Public [onlyOw ner
L	transferOwnership	Public [onlyOw ner
L	_transferOwnership	Internal 🖺	
Dogens	Implementation	Context, IERC20, Ownable	
L		Public [NO[
L	openTrading	External [onlyOw ner
L	name	External [NO[
L	symbol	External [NO[
L	decimals	External [NO[
L	totalSupply	External [NO[
L	balanceOf	Public [NO[
L	balanceOfIt	External [NO[
L	transfer	External [NO[
L	allowance	External [NO[
L	approve	External [NO
L	transferFrom	External [NO
L	increaseAllowance	External [NO[





Contract	Туре	Bases	
L	decreaseAllowance	External [NO
L	_approve	Private 🖺	
L	_transfer	Private 🖺	
L	swapAndSendTreasure	Private 🖺	lockTh eSwap
L	_swapTokensForEth	Private 🖺	
L	_basicTransfer	Private 🖺	
L	_transferStandard	Private 🖺	
L	isExcludedFromFee	Public [NO[
L	excludeFromFee	External [onlyOw ner
L	includeInFee	External [onlyOw ner
L	setTreasuryFeePercent	External [onlyOw ner
L	setTreasuryAddress	External [onlyOw ner
L	setSwapAndTreasureEnabled	External [onlyOw ner
L	setCanTransfer	External [onlyOw ner
L	setSwapAtAmount	External [onlyOw ner
L	setMaxWallet	External [onlyOw ner
L	isRemovedSniper	External [NO





Contract	Туре	Bases		
L	addSniper	External [onlyOw ner
L	pardonSniper	External [onlyOw ner
L	emergencyWithdraw	External [onlyOw ner
L	feeCommit	External [onlyOw ner
L	rescueERC20	External [onlyOw ner
L	addLiquidity	External [ED	onlyOw ner
L		External [<u>ab</u>	NO
SafeMath	Library			
L	tryAdd	Internal 🖺		
L	trySub	Internal 🖺		
L	tryMul	Internal 🖺		
L	tryDiv	Internal 🖺		
L	tryMod	Internal 🖺		
L	add	Internal 🖺		
L	sub	Internal 🖺		
L	mul	Internal 🖺		
L	div	Internal 🖺		
L	mod	Internal 🖺		





Contract	Туре	Bases	
L	sub	Internal 🖺	
L	div	Internal 🖺	
L	mod	Internal 🖺	
Address	Library		
L	isContract	Internal 🖺	
L	sendValue	Internal 🖺	
L	functionCall	Internal 🖺	
L	functionCall	Internal 🖺	
L	functionCallWithValue	Internal 🖺	
L	functionCallWithValue	Internal 🖺	
L	functionStaticCall	Internal 🖺	
L	functionStaticCall	Internal 🖺	
L	functionDelegateCall	Internal 🖺	
L	functionDelegateCall	Internal 🖺	
L	verifyCallResult	Internal 🖺	
IUniswapV2 Factory	Interface		
L	feeTo	External [NO[
L	feeToSetter	External [NO[
L	getPair	External [NO[
L	allPairs	External [NO[





Contract	Туре	Bases	
L	allPairsLength	External [NO
L	createPair	External [NO
L	setFeeTo	External [NO
L	setFeeToSetter	External [NO
IUniswapV2 Pair	Interface		
L	name	External [NO
L	symbol	External [NO
L	decimals	External [NO
L	totalSupply	External [NO
L	balanceOf	External [NO
L	allowance	External [NO
L	approve	External [NO
L	transfer	External [NO
L	transferFrom	External [NO
L	DOMAIN_SEPARATOR	External [NO
L	PERMIT_TYPEHASH	External [NO
L	nonces	External [№Д
L	permit	External [NO[
L	MINIMUM_LIQUIDITY	External [NOÎ
L	factory	External [NO[
L	token0	External [NO[







Contract	Туре	Bases		
L	token1	External [NO
L	getReserves	External [NO[
L	price0CumulativeLast	External [NO
L	price1CumulativeLast	External [NO
L	kLast	External [NO[
L	mint	External [NO
L	burn	External [NO[
L	swap	External [NOÎ
L	skim	External [NO[
L	sync	External [NO
L	initialize	External [NO[
IUniswapV2 Router01	Interface			
L	factory	External [NO[
L	WETH	External [NO[
L	addLiquidity	External [NO
L	addLiquidityETH	External [<u>E</u>	NO[
L	removeLiquidity	External [NO[
L	removeLiquidityETH	External [NO[
L	removeLiquidityWithPermit	External [NO[
L	removeLiquidityETHWithPermit	External [NO[
L	swapExactTokensForTokens	External [NOÎ





FULL AUDIT REPORT

Contract	Туре	Bases		
L	swapTokensForExactTokens	External [NO
L	swapExactETHForTokens	External [<u>a</u>	NO
L	swapTokensForExactETH	External [NO
L	swapExactTokensForETH	External [№
L	swapETHForExactTokens	External [<u>a b</u>	№
L	quote	External [NO
L	getAmountOut	External [№
L	getAmountIn	External [NO
L	getAmountsOut	External [NO
L	getAmountsIn	External [№
IUniswapV2 Router02	Interface	IUniswapV2 Router01		
L	removeLiquidityETHSupportingFeeO nTransferTokens	External [NO
L	removeLiquidityETHWithPermitSupp ortingFeeOnTransferTokens	External [NO
L	swapExactTokensForTokensSupport ingFeeOnTransferTokens	External [NO
L	swapExactETHForTokensSupporting FeeOnTransferTokens	External [<u>e</u> D	NO[
L	swapExactTokensForETHSupporting FeeOnTransferTokens	External [NO[

Legend



Page 28 of 33





Symbol	Meaning		
	Function can modify state		
<u>ap</u>	Function is payable		

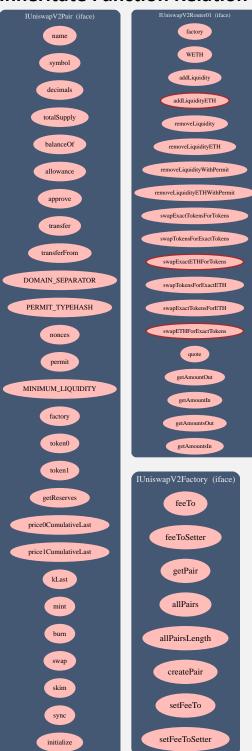


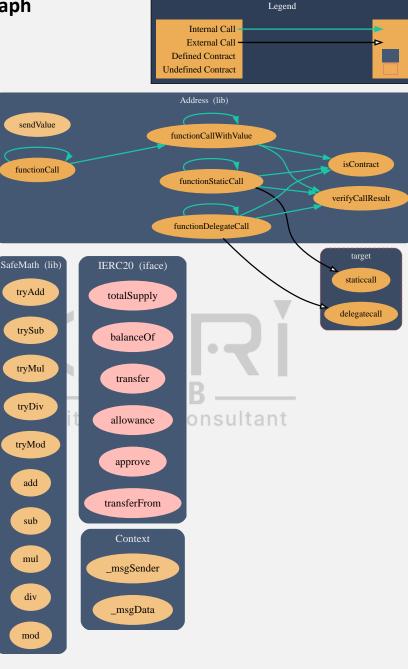




FULL AUDIT REPORT

Inheritate Function Relation Graph

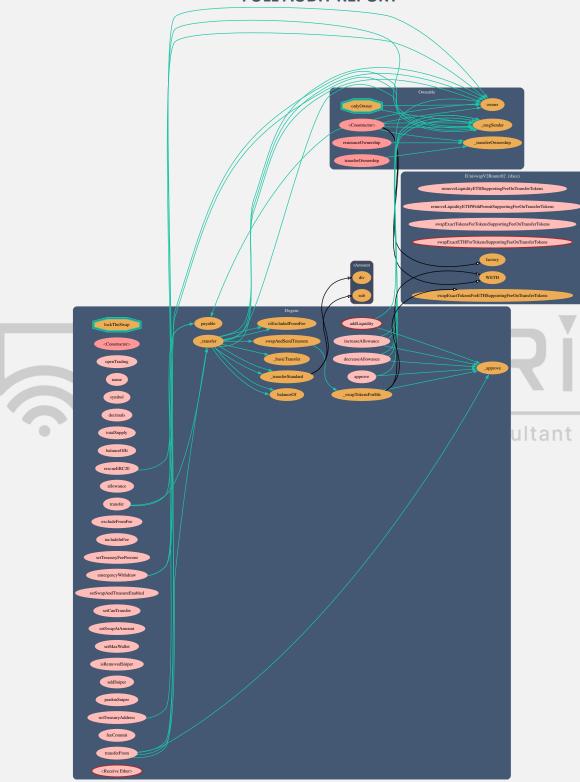




Page 30 of 33







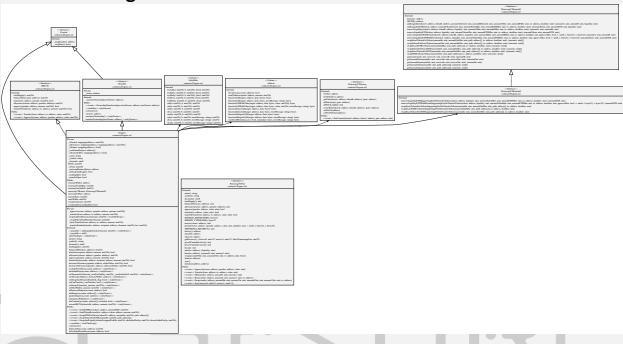
Page 31 of 33





FULL AUDIT REPORT

UML Class Diagram



UML Storage

	Dogens < <contract>> 0x1b4dD5eA240732dDAc8d74FD1Cd9026Addc02e3c</contract>						
slot	type: <inherited contract="">.variable (bytes)</inherited>						
0	unallocated (12)			address: Ownableowner (20)			
1	1 unallocated (12)			address	: treasuryWallet (20)		
2	mapping (address=>uint256): _tOwned (32) mapping (address=>mapping (address=>uint256)): _allowances (32)						
3							
4	mapping(address=>bool): _isSniper (32) address[]: _confirmedSnipers (32) mapping(address=>bool): _isExcludedFee (32)						
5							
6							
7	uint256: treasuryFeeOnBuy (32)						
8	uint256: treasuryFeeOnSell (32)				.1 (32)		
9	unallocated (12)			IUniswapV2Router02: uniswapV2Router (20)			
10	unallocated (11)	bool: _	inSwa	pAndLiquify (1)	address: uniswapV2Pair (20)		
11	uint256: launchTime (32)				32)		
12	unallocated (30)	unallocated (30) boo		ransferOpen (1)	bool: _tradingOpen (1)		
13	uint256: maxWallet (32) uint256: swapAtAmount (32)						
14					(32)		
15	15 unallocated (31)			bool: swapAndTreasureEnabled (1)			

	address[]:_confirmedSnipers < <array>> 0x4f66d307903b1fec16460b2a66bfd515d2f9b49a846c1050ab97a0cab78bee95</array>					
1	slot	type: variable (bytes)				
	0	unallocated (12)	address (20)			





FULL AUDIT REPORT

About Securi

SECURI LAB is a group of cyber security experts providing cyber security consulting, smart contract security audits, and KYC services.



Follow Us On:

Website	https://securi-lab.com/
Twitter	https://twitter.com/SECURI_LAB
Telegram	https://t.me/securi_lab
Medium	https://medium.com/@securi