



RUGFREECOINS



PandaX Token

RugfreeCoins Verified on August 08th, 2023

Overview

- ✓ No mint function found, the owner cannot mint tokens after initial deployment.
- ✓ The owner can't set a max transaction limit
- ✓ The owner can't pause trading once it's enabled
- ✗ The owner must enable trade for the holders, if trading remains disabled, no one would be able to buy and sell.
- ✓ The owner can't change fees over 20%.
- ✓ The owner can't blacklist wallets.
- ✓ The owner can't set a max wallet limit
- ✓ The owner can't claim the contract's balance of its own token.

! HIGH SEVERITY ISSUES

The owner must enable trade for the holders, if trading remains disabled, no one would be able to buy and sell.

```
function enableTrading() external onlyOwner{
    require(tradingEnabled == false, "Trading is already enabled");
    tradingEnabled = true;
}
```

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Audit details



Audited project
PandaX Token



Contract Address
0xC2d78D7675f58ED50903D50170f498238100B1C6



Client contact
PandaX Token Team



Blockchain
Binance Smart chain



Project website
<https://pandax.live/>

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 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

RugfreeCoins was commissioned by the **PandaX Token Team** to perform an audit of the smart contract.

<https://bscscan.com/address/0xC2d78D7675f58ED50903D50170f498238100B1C6>

This audit focuses on verifying that the smart contract is secure, resilient, and working according to the specifications.

The information in this report should be used to understand the risk exposure of the smart contract, project feasibility, and long-term sustainability, and as a guide to improving the smart contract's security posture by remediating the identified issues.

Tokenomics

▲ 5% tax when buying & selling (08/08/2023)

2% trade is distributed among holders as rewards in tokens.












2% of trade goes to the marketing wallet in BNB

1% of trade goes to buyback and burn tokens.

Target market and the concept

- ▶ Anyone who's interested in the Crypto space with long-term investment plans.
- ▶ Anyone who's ready to earn a passive income by holding tokens.
- ▶ Anyone who's interested in trading tokens.
- ▶ Anyone who's interested in taking part in the PandaX token ecosystem.
- ▶ Anyone who's interested in taking part in the future plans of PandaX Token.
- ▶ Anyone who's interested in making financial transactions with any other party using PandaX Token as the currency.

Potential to grow with score points

 Project efficiency	8 / 10
 Project uniqueness	8 / 10
 Information quality	8 / 10
 Service quality	8 / 10
 System quality	8 / 10
 Impact on the community	8 / 10
 Impact on the business	9 / 10
 Preparing for the future	8 / 10
 Smart contract security	9 / 10
 Smart contract functionality assessment	10 / 10
 Total Score	8.4/ 10

Contract details

Token contract details for 08th of August 2023




























Contract name	PandaX
Contract address	0xC2d78D7675f58ED50903D50170f498238100B1C6
Token supply	320,690,000,000,000
Token ticker	PandaX
Decimals	9
Token holders	1
Transaction count	1
Contract deployer address	0x7F8d1c8D55EFBc4F3E89fb5c0169776b333fBdCB
Contract's current owner address	0x7f8d1c8d55efbc4f3e89fb5c0169776b333fbdcb
Marketing wallet	0xde34cdcefac9c4bc5822d7f24845b7867db90f62























































Contract code function details

















Nº	Category	Item	Result
1	Coding conventions	BRC20 Token standards	PASS ▾
		Compile errors	PASS ▾
		Compiler version security	PASS ▾
		Visibility specifiers	PASS ▾
		Gas consumption	PASS ▾
		SafeMath features	PASS ▾
		Fallback usage	PASS ▾
		tx.origin usage	PASS ▾
		Deprecated items	PASS ▾
		Redundant code	PASS ▾
2	Function call audit	Overriding variables	PASS ▾
		Authorization of function call	PASS ▾
		Low level function (call/delegate call) security	PASS ▾
		Returned value security	PASS ▾
3	Business security & centralisation	Self destruct function security	PASS ▾
		Access control of owners	HIGH ▾
		Business logics	PASS ▾
4	Integer overflow/underflow	Business implementation	PASS ▾
5	Reentrancy		PASS ▾
6	Exceptional reachable state		PASS ▾
7	Transaction ordering dependence		PASS ▾
8	Block properties dependence		PASS ▾
9	Pseudo random number generator (PRNG)		PASS ▾
10	DoS (Denial of Service)		PASS ▾
11	Token vesting implementation		PASS ▾
12	Fake deposit		PASS ▾
13	Event security		PASS ▾












Contract description table






























The below table represents the summary of the contracts and methods in the token contract. We scanned the whole contract and listed down all the Interfaces, functions, and implementations with their visibility and mutability.

Contract	Type	Bases		
L	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
L	_msgSender	Internal 		
L	_msgData	Internal 		
Ownable	Implementation	Context		
L		Public 		NO 
L	owner	Public 		NO 
L	renounceOwnership	Public 		onlyOwner
L	transferOwnership	Public 		onlyOwner
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 
Address	Library			
L	isContract	Internal 		
L	sendValue	Internal 		

L	functionCall	Internal 		
L	functionCall	Internal 		
L	functionCallWithValue	Internal 		
L	functionCallWithValue	Internal 		
L	_functionCallWithValue	Private 		
IUniswapV2 Factory	Interface			
L	feeTo	External 		NO 
L	feeToSetter	External 		NO 
L	getPair	External 		NO 
L	allPairs	External 		NO 
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 !		NO !
L	permit	External !		NO !
L	MINIMUM_LIQUIDITY	External !		NO !
L	factory	External !		NO !
L	token0	External !		NO !
L	token1	External !		NO !
L	getReserves	External !		NO !
L	price0CumulativeLast	External !		NO !
L	price1CumulativeLast	External !		NO !
L	kLast	External !		NO !
L	burn	External !		NO !
L	swap	External !		NO !
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 !		NO !
L	removeLiquidity	External !		NO !
L	removeLiquidityETH	External !		NO !
L	removeLiquidityWithPermit	External !		NO !
L	removeLiquidityETHWithPermit	External !		NO !
L	swapExactTokensForTokens	External !		NO !
L	swapTokensForExactTokens	External !		NO !
L	swapExactETHForTokens	External !		NO !
L	swapTokensForExactETH	External !		NO !

L	swapExactTokensForETH	External !		NO !
L	swapETHForExactTokens	External !		NO !
L	quote	External !		NO !
L	getAmountOut	External !		NO !
L	getAmountIn	External !		NO !
L	getAmountsOut	External !		NO !
L	getAmountsIn	External !		NO !
IUniswapV2 Router02	Interface	IUniswapV2 Router01		
L	removeLiquidityETHSupportingFeeOnTransferTokens	External !		NO !
L	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External !		NO !
L	swapExactTokensForTokensSupportingFeeOnTransferTokens	External !		NO !
L	swapExactETHForTokensSupportingFeeOnTransferTokens	External !		NO !
L	swapExactTokensForETHSupportingFeeOnTransferTokens	External !		NO !
PandaX	Implementation	Context, IERC20, Ownable		
L		Public !		NO !
L	name	Public !		NO !
L	symbol	Public !		NO !
L	decimals	Public !		NO !
L	totalSupply	Public !		NO !
L	balanceOf	Public !		NO !
L	transfer	Public !		NO !
L	allowance	Public !		NO !
L	approve	Public !		NO !
L	transferFrom	Public !		NO !

L	increaseAllowance	Public !		NO !
L	decreaseAllowance	Public !		NO !
L	isExcludedFromReward	Public !		NO !
L	totalReflectionDistributed	Public !		NO !
L	deliver	Public !		NO !
L	reflectionFromToken	Public !		NO !
L	tokenFromReflection	Public !		NO !
L	excludeFromReward	Public !		onlyOwner
L	includeInReward	External !		onlyOwner
L		External !		NO !
L	claimStuckTokens	External !		onlyOwner
L	_reflectFee	Private 		
L	_getValues	Private 		
L	_getTValues	Private 		
L	_getRValues	Private 		
L	_getRate	Private 		
L	_getCurrentSupply	Private 		
L	_takeLiquidity	Private 		
L	_takeMarketing	Private 		
L	calculateTaxFee	Private 		
L	calculateLiquidityFee	Private 		
L	calculateMarketingFee	Private 		
L	removeAllFee	Private 		
L	setBuyFee	Private 		
L	setSellFee	Private 		
L	isExcludedFromFee	Public !		NO !
L	_approve	Private 		
L	enableTrading	External !		onlyOwner
L	_transfer	Private 		

L	buybackAndBurn	Private 🔒	🛑	
L	setSwapTokensAtAmount	External !	🛑	onlyOwner
L	setSwapEnabled	External !	🛑	onlyOwner
L	_tokenTransfer	Private 🔒	🛑	
L	_transferStandard	Private 🔒	🛑	
L	_transferToExcluded	Private 🔒	🛑	
L	_transferFromExcluded	Private 🔒	🛑	
L	_transferBothExcluded	Private 🔒	🛑	
L	excludeFromFees	External !	🛑	onlyOwner
L	changeMarketingWallet	External !	🛑	onlyOwner
L	setBuyFeePercentages	External !	🛑	onlyOwner
L	setSellFeePercentages	External !	🛑	onlyOwner
L	enableWalletToWalletTransferWithoutFee	External !	🛑	onlyOwner

Legend

Symbol	Meaning
🛑	Function can modify state
💰	Function is payable


Inheritance Hierarchy



Security issue checking status

❖ High severity issues

The owner must enable trade for the holders, if trading remains disabled, no one would be able to buy and sell.



```
function enableTrading() external onlyOwner{
    require(tradingEnabled == false, "Trading is already enabled");
    tradingEnabled = true;
}
```

❖ Medium severity issues

No medium severity issues found

❖ Low severity issues

No low-severity issues found

Owner privileges

- ❖ Owner can change swap token amount minimum up to 0.001%

```
function setSwapTokensAtAmount(uint256 newAmount) external onlyOwner() {  
    require(newAmount > totalSupply() / 1e5, "SwapTokensAtAmount must be greater  
than 0.001% of total supply");  
    swapTokensAtAmount = newAmount;  
    emit SwapTokensAtAmountUpdated(newAmount);  
}
```

- ❖ Owner can enable/disable swapping

```
function setSwapEnabled(bool _enabled) external onlyOwner {  
    swapEnabled = _enabled;  
    emit SwapEnabledUpdated(_enabled);  
}
```

- ❖ Owner can include/exclude wallets from fees

```
function excludeFromFees(address account, bool excluded) external onlyOwner {  
    require(!_isExcludedFromFees[account] || excluded, "Account is already the  
value of 'excluded'");  
    _isExcludedFromFees[account] = excluded;  
    emit ExcludeFromFees(account, excluded);  
}
```

❖ Owner change marketing wallet

```
function changeMarketingWallet(address _marketingWallet) external onlyOwner {
    require(_marketingWallet != marketingWallet, "Marketing wallet is already that address");
    require(_marketingWallet != address(0), "Marketing wallet is the zero address");
    marketingWallet = _marketingWallet;
    emit MarketingWalletChanged(marketingWallet);
}
```

❖ Owner can change all buy and sell fees maximum up to 20% (buy fees 10% and sell fees 10%)

```
function setBuyFeePercentages(uint256 _taxFeeonBuy, uint256 _buybackBurnFeeOnBuy, uint256 _marketingFeeonBuy) external onlyOwner {
    taxFeeonBuy = _taxFeeonBuy;
    buybackBurnFeeOnBuy = _buybackBurnFeeOnBuy;
    marketingFeeonBuy = _marketingFeeonBuy;
    totalBuyFees = _taxFeeonBuy + _buybackBurnFeeOnBuy + _marketingFeeonBuy;
    require(totalBuyFees <= 10, "Buy fees cannot be greater than 10%");
    emit BuyFeesChanged(taxFeeonBuy, buybackBurnFeeOnBuy, marketingFeeonBuy);
}

function setSellFeePercentages(uint256 _taxFeeonSell, uint256 _buybackBurnFeeOnSell, uint256 _marketingFeeonSell) external onlyOwner {
    taxFeeonSell = _taxFeeonSell;
    buybackBurnFeeOnSell = _buybackBurnFeeOnSell;
    marketingFeeonSell = _marketingFeeonSell;
    totalSellFees = _taxFeeonSell + _buybackBurnFeeOnSell + _marketingFeeonSell;
    require(totalSellFees <= 10, "Sell fees cannot be greater than 10%");
    emit SellFeesChanged(taxFeeonSell, buybackBurnFeeOnSell, marketingFeeonSell);
}
```

- ❖ Owner can enable/disable fees on wallet-to-wallet transfers

```
function enableWalletToWalletTransferWithoutFee(bool enable) external onlyOwner
{
    require(walletToWalletTransferWithoutFee != enable, "Wallet to wallet
transfer without fee is already set to that value");
    walletToWalletTransferWithoutFee = enable;
    emit WalletToWalletTransferWithoutFeeEnabled(enable);
}
```

- ❖ Owner can claim any bep20 tokens from the contract, can not claim native tokens

```
function claimStuckTokens(address token) external onlyOwner {
    require(token != address(this), "Owner cannot claim native tokens");
    if (token == address(0x0)) {
        payable(msg.sender).sendValue(address(this).balance);
        return;
    }
    IERC20 ERC20token = IERC20(token);
    uint256 balance = ERC20token.balanceOf(address(this));
    ERC20token.transfer(msg.sender, balance);
}
```

- ❖ Owner can include/exclude wallets from rewards

```
function excludeFromReward(address account) public onlyOwner() {
    require(!_isExcluded[account], "Account is already excluded");
    if(_rOwned[account] > 0) {
        _tOwned[account] = tokenFromReflection(_rOwned[account]);
    }
    _isExcluded[account] = true;
    _excluded.push(account);
}

function includeInReward(address account) external onlyOwner() {
    require(_isExcluded[account], "Account is already included");
    for (uint256 i = 0; i < _excluded.length; i++) {
        if (_excluded[i] == account) {
            _excluded[i] = _excluded[_excluded.length - 1];
            _tOwned[account] = 0;
            _isExcluded[account] = false;
            _excluded.pop();
            break;
        }
    }
}
```

- ❖ Owner can enable trading, once enabled can not disable again

```
function enableTrading() external onlyOwner{
    require(tradingEnabled == false, "Trading is already enabled");
    tradingEnabled = true;
}
```

Audit conclusion

RugFreeCoins team has performed in-depth testing, line-by-line manual code review, and automated audit of the smart contract. The smart contract was analyzed mainly for common smart contract vulnerabilities, exploits, manipulations, and hacks. According to the smart contract audit.

Smart contract functional Status:	PASS ▾
Number of risk issues:	1
Solidity code functional issue level:	PASS ▾
Number of owner privileges:	9
Centralization risk correlated to the active owner:	HIGH ▾
Smart contract active ownership:	ACTIVE ▾