

# expelee

Building the Futuristic **Blockchain Ecosystem**

## Audit Report FOR



## Twin Protocol

# OVERVIEW

The Expelee team has performed a line-by-line manual analysis and automated review of the smart contract. The smart contract was analysed mainly for common smart contract vulnerabilities, exploits, and manipulation hacks. According to the smart contract audit:

 <b>Audit Result</b>	<b>Passed</b>
 <b>KYC Verification</b>	<b>Done</b>
 <b>Audit Date</b>	<b>12 Jan 2023</b>

**Audit Passed With no Risk**

**-Team Expelee**

# PROJECT DESCRIPTION

## Twin Protocol

Twin Protocol is PvP AMM Synthetic Assets Exchange, matching traders against each other in leverage trades with the option for liquidity providers to participate.

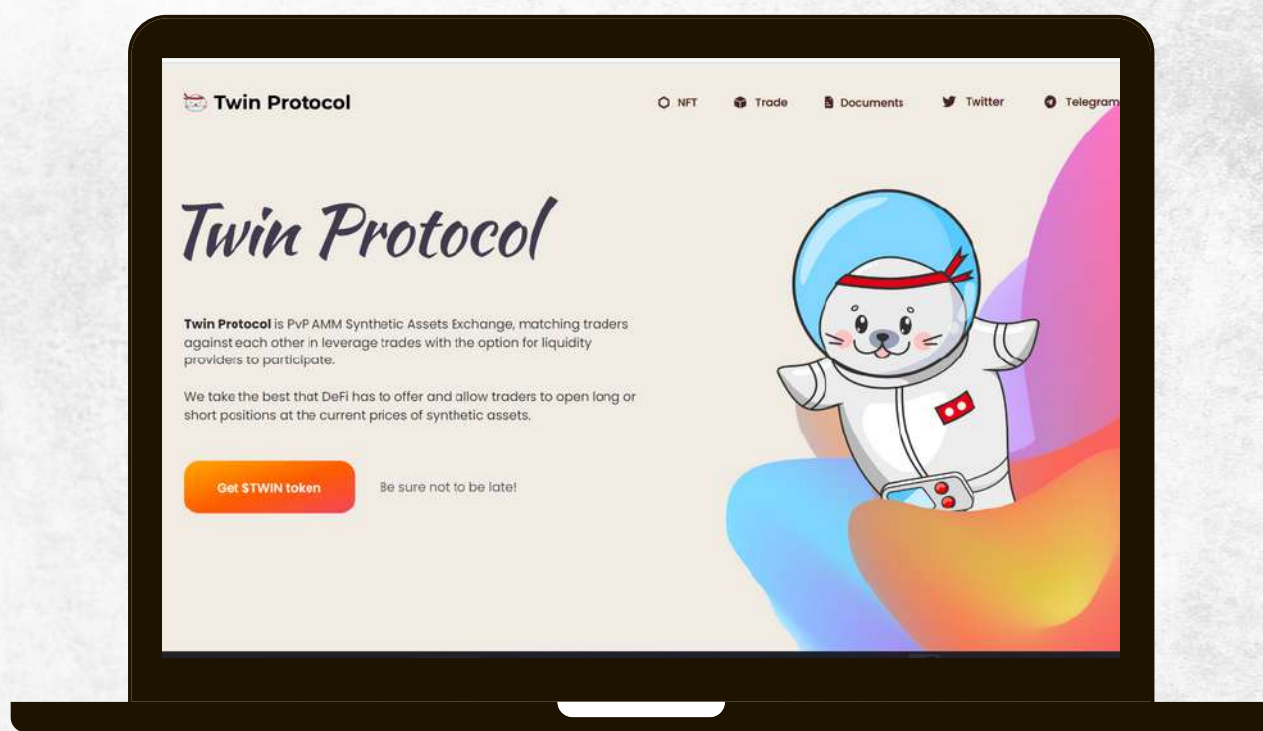
We take the best that DeFi has to offer and allow traders to open long or short positions at the current prices of synthetic assets.





# Social Media Profiles

## Twin Protocol



 <https://twinprotocol.xyz/>

 <https://t.me/Twinprotocolxyz>

 <https://twitter.com/Twinprotocolxyz>

It's always good to check the social profiles of the project,  
before making your investment.

**-Team Expelee**

# CONTRACT DETAILS

Token Name

**Twin Protocol**

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Symbol

**TWIN**

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Network

**Arbitrum Chain**

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Language

**Solidity**

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Contract Address (Verified)

**0x4B1F493678e5DA4F19fEe5245430539e36Dccd19**

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Token Type

**ERC20**

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Total Supply

**10,000,000**

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Compiler

**v0.8.4+commit.c7e474f2**

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License

**MIT**

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Contract SHA-256 Checksum:

**7b5ad604d7ba2ea760a86c234c1e90bc1d56a1c0c913da505197b49e87dcbc4d**

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# AUDIT METHODOLOGY



## Audit Details

Our comprehensive audit report provides a full overview of the audited system's architecture, smart contract codebase, and details on any vulnerabilities found within the system.



## Audit Goals

The audit goal is to ensure that the project is built to protect investors and users, preventing potentially catastrophic vulnerabilities after launch, that lead to scams and rugpulls.



## Code Quality

Our analysis includes both automatic tests and manual code analysis for the following aspects:

- Exploits
- Back-doors
- Vulnerability
- Accuracy
- Readability



## Tools

- DE
- Open Zeppelin
- Code Analyzer
- Solidity Code
- Compiler
- Hardhat

# FUNCTION OVERVIEW

Can Take Back Ownership

Not Detected

Owner Change Balance

Not Detected

Blacklist

Not Detected

Modify Fees

Not Detected

Proxy

Not Detected

Whitelisted

Not Detected

Anti Whale

Not Detected

Trading Cooldown

Not Detected

Transfer Pausable

Not Detected

Cannot Sell All

Not Detected

Hidden Owner

Not Detected

Mint

Not Detected



# VULNERABILITY CHECKLIST

Design Logic	Passed
Compiler warnings.	Passed
Private user data leaks	Passed
Timestamp dependence	Passed
Integer overflow and underflow	Passed
Race conditions & reentrancy. Cross-function race conditions	Passed
Possible delays in data delivery	Passed
Oracle calls	Passed
Front running	Passed
DoS with Revert	Passed
DoS with block gas limit	Passed
Methods execution permissions	Passed
Economy model	Passed
Impact of the exchange rate on the logic	Passed
Malicious Event log	Passed
Scoping and declarations	Passed
Uninitialized storage pointers	Passed
Arithmetic accuracy	Passed
Cross-function race conditions	Passed
Safe Zeppelin module	Passed
Fallback function security	Passed



# RISK CLASSIFICATION

When performing smart contract audits, our specialists look for known vulnerabilities as well as logical and access control issues within the code. The exploitation of these issues by malicious actors may cause serious financial damage to projects that failed to get an audit in time. We categorize these vulnerabilities by the following levels:

## High Risk

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Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

## Medium Risk

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Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

## Low Risk

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Issues on this level are minor details and warning that can remain unfixed.

## Informational

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Information level is to offer suggestions for improvement of efficacy or security for features with a risk free factor.

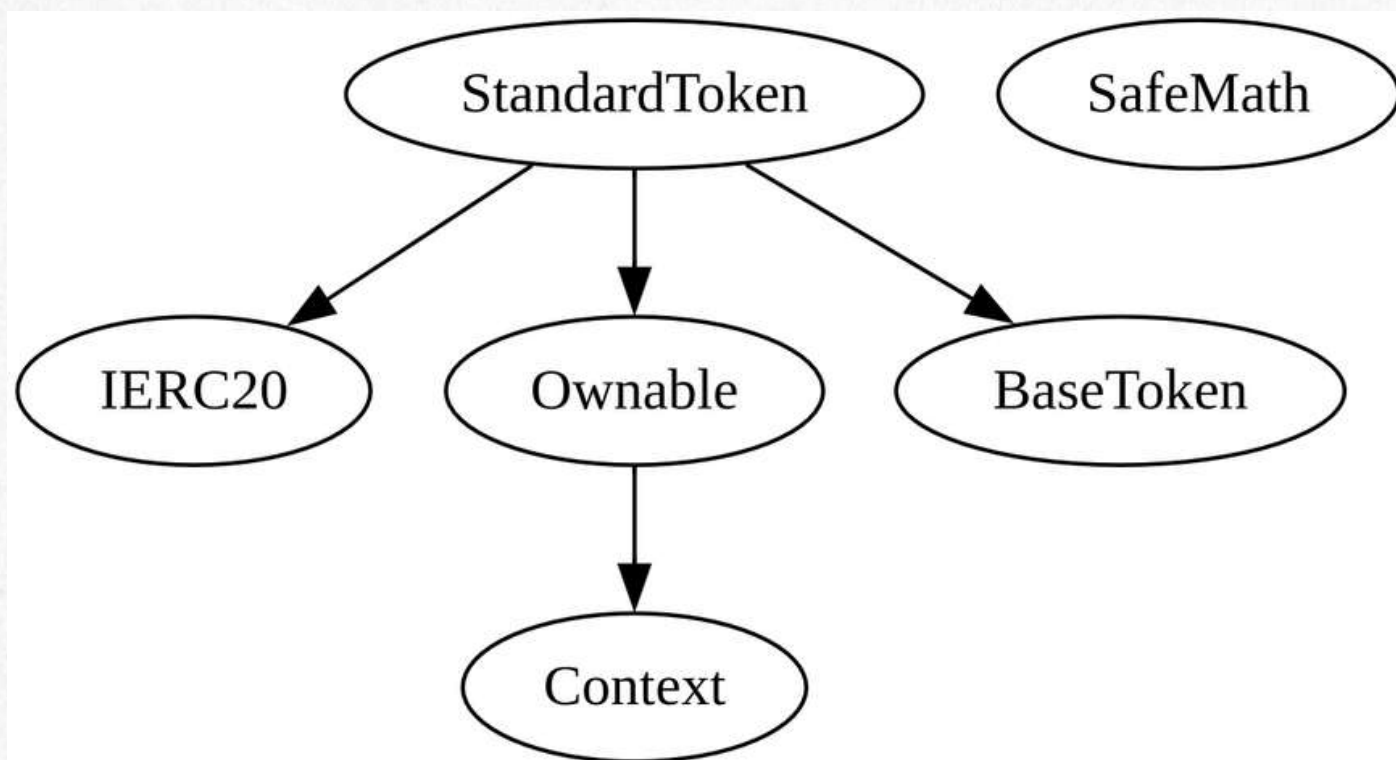
# AUDIT SUMMARY

## Ownership:

0xbfC141a02AE68124573Fe81765e5d7361A6206b2 is the owner of the contract

## Contracts & Inheritance Tree:

All of below contracts are in this audit scope





## Summary

- Owner is not able to change or set taxes (0% tax)
- Owner is not able to set a max amount for buys/sells/transfer
- Owner is not able to pause trades
- Owner is not able to mint new tokens
- Owner is not able to blacklist an arbitrary address

## SWC:

floating pragma



# MANUAL AUDIT

## Severity Criteria

Expelee assesses the severity of disclosed vulnerabilities according to a methodology based on OWASP standards.

Vulnerabilities are divided into three primary risk categories: **high**, **medium**, and **low**.

High-level considerations for vulnerabilities span the following key areas when conducting assessments:

- Malicious Input Handling
- Escalation of privileges
- Arithmetic
- Gas use

Overall Risk Severity				
Impact	HIGH	Medium	High	Critical
	MEDIUM	Low	Medium	High
	LOW	Note	Low	Medium
		LOW	MEDIUM	HIGH
	Likelihood			

## Findings Summary

- **High Risk Findings:**0
- **Medium Risk Findings:**0
- **Low Risk Findings:**0
- **Suggestions & discussion:** 0
- **Gas Optimizations :** 0

**No Risk Findings**



## ABOUT EXPELEE

Expelee is a product-based aspirational Web3 Start-up. Coping up with numerous solutions for blockchain Security and constructing a Web3 Ecosystem from Deal making platform to developer hosting open platform, while also developing our own commercial and sustainable blockchain.

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# expelee

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