

# ZELWIN token

## smart contract audit report

Prepared for:  
zelwin.com

Authors: HashEx audit team  
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# Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice 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.

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# Introduction

HashEx was commissioned by the ZELWIN team to perform an audit of their smart contracts. The audit was conducted between August 05 and August 06, 2021.

The audited smart contract is deployed to Ethereum mainnet at the address:

[0x5319e86F0e41a06E49eb37046b8c11D78bcAd68C](#). No documentation was provided.

The audited contract is an ERC20 standard token [1] with a fixed initial supply and restricted transfers to the contract itself.

The purpose of this audit was to achieve the following:

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

Information in this report should be used to understand the risk exposure of smart contracts, and as a guide to improving the security posture of smart contracts by remediating the issues that were identified.

## Contracts overview

### ZELWIN

Implementation of the ERC20 token standard [1]. The total supply of the token is fixed by the initial supply of 3e8 tokens, it has no minting mechanisms or ownable functions, except `transferOwnership()`.

## Found issues and recommendations

No issues were found in the reviewed contract. We recommend using OpenZeppelin's contracts [2] as imported libraries. ZELWIN token is Ownable but contains no owner functions.

## Conclusion

The reviewed contract is deployed to Ethereum mainnet at the address:

[0x5319e86F0e41a06E49eb37046b8c11D78bcAd68C](#). The audited contract is an ERC20 token made with standard templates.

No critical, high, medium, or low severity issues were found. Recommendations could be found in the corresponding section.

## References

1. [ERC-20 standard](#)
2. [OpenZeppelin contracts](#)

## Appendix. Issues' severity classification

We consider an issue critical if it may cause unlimited losses or breaks the workflow of the contract and could be easily triggered.

High severity issues may lead to limited losses or break interaction with users or other contracts under very specific conditions.

Medium severity issues do not cause full loss of functionality but break the contract logic.

Low severity issues are typically nonoptimal code, unused variables, errors in messages. Usually, these issues do not need immediate reactions.

## Appendix B. List of examined issue types

Business logic overview

Functionality checks

Following best practices

Access control and authorization

Reentrancy attacks

Front-run attacks

DoS with (unexpected) revert

DoS with block gas limit

Transaction-ordering dependence

ERC/BEP and other standards violation

Unchecked math

Implicit visibility levels

Excessive gas usage

Timestamp dependence

Forcibly sending ether to a contract

Weak sources of randomness

Shadowing state variables

Usage of deprecated code