

FGDSwap Router

smart contracts
final audit report

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1. 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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2. Overview

HashEx was commissioned by the FGDSwap team to perform an audit of their smart contract. The audit was conducted between 13/02/2023 and 14/02/2023.

The purpose of this audit was to achieve the following:

- Identify potential security issues with smart contracts
- Formally check the logic behind given smart contracts.

Information in this report should be used for understanding 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.

The code is available at [0xC0b4cCa71A0Ba3E96631390Ebb9A370BD95CbE24](https://github.com/FGDSwap/FGDSwapRouter) in the Binance Smart Chain (BSC) network.

2.1 Summary

Project name	FGDSwap Router
URL	https://fgdswap.io
Platform	Binance Smart Chain
Language	Solidity

2.2 Contracts

Name	Address
FGDSRouter	0xC0b4cCa71A0Ba3E96631390Ebb9A370BD95CbE24

3. Found issues

No Issues Found

4. Contracts

C1. FGDSRouter

Overview

The FGDSRouter is a direct fork of PancakeSwap Router v2, which is based on [Uniswap V2](#). There are publicly available audits of Uniswap V2, the Router contract was audited by [dapp.org](#). No issues were found since neither in Uniswap Router, nor in its forks, including PancakeSwap.

5. Conclusion

The FGDSRouter is a complete fork of PancakeSwap Router, which is proven to be a well-known bug-free contract. No additional code was introduced into FGDSRouter.

Appendix A. Issues' severity classification

- **Critical.** Issues that may cause an unlimited loss of funds or entirely break the contract workflow. Malicious code (including malicious modification of libraries) is also treated as a critical severity issue. These issues must be fixed before deployments or fixed in already running projects as soon as possible.
- **High.** Issues that may lead to a limited loss of funds, break interaction with users, or other contracts under specific conditions. Also, issues in a smart contract, that allow a privileged account the ability to steal or block other users' funds.
- **Medium.** Issues that do not lead to a loss of funds directly, but break the contract logic. May lead to failures in contracts operation.
- **Low.** Issues that are of a non-optimal code character, for instance, gas optimization tips, unused variables, errors in messages.
- **Informational.** Issues that do not impact the contract operation. Usually, informational severity issues are related to code best practices, e.g. style guide.

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

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