



LittleLink Smart Contract Security Audit

<u>TechRate</u> September, 2021

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 below 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

TechRate was commissioned by LittleLink to perform an audit of smart contracts:

https://bscscan.com/token/0xa4d7d5cddc27948c30a9e37fb8d242a028d21bcd

The purpose of the audit was to achieve the following:

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

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Issues Checking Status

Issue description	Checking status
1. Compiler errors.	Passed
2. Race conditions and Reentrancy. Cross-function race conditions.	Passed
3. Possible delays in data delivery.	Passed
4. Oracle calls.	Passed
5. Front running.	Passed
6. Timestamp dependence.	Passed
7. Integer Overflow and Underflow.	Passed
8. DoS with Revert.	Passed
9. DoS with block gas limit.	Low issues
10. Methods execution permissions.	Passed
11. Economy model of the contract.	Passed
12. The impact of the exchange rate on the logic.	Passed
13. Private user data leaks.	Passed
14. Malicious Event log.	Passed
15. Scoping and Declarations.	Passed
16. Uninitialized storage pointers.	Passed
17. Arithmetic accuracy.	Passed
18. Design Logic.	Passed
19. Cross-function race conditions.	Passed
20. Safe Open Zeppelin contracts implementation and usage.	Passed
21. Fallback function security.	Passed

Security Issues

No high severity issues found.

✓ Medium Severity Issues

No medium severity issues found.

- Low Severity Issues
 - 1. Out of gas

Issue:

The function airdropToWallets() uses the loop to distribute airdrops.
 Function will be aborted with OUT_OF_GAS exception if there will be a long airdrop to addresses list.

Recommendation:

Check that the airdropWallets array length is not too big.

Issue:

 The function excludeMultipleAccountsFromFees() uses the loop to exclude multiple accounts from fees. Function will be aborted with OUT_OF_GAS exception if there will be a long addresses list.

Recommendation:

Be careful about accounts array length.

Notes:

- Dividend tracker may be changed. So that logic of setBalance and other functions could be another and not audited.
- There is airdrop parameters changing in transfer function that never used.

Owner privileges (In the period when the owner is not renounced)

- Owner can add addresses to multiple exclusions.
- Owner can airdrop to wallets.
- Owner can change presale and presale router address.
- Owner can change dividend tracker.
- Owner can exclude from dividends.
- Owner can enable trading.
- Owner can enable swap.
- Owner can change maxWallet.
- Owner can change maxTransactionAmount amount.
- Owner can change fees.
- Owner can change Uniswap router address.
- Owner can change sellFeeIncreaseFactor.
- Owner can exclude from max transaction amount.
- Owner can exclude from the fees.
- Owner can exclude and include addresses in automatedMarketMakerPairs array.
- Owner can change marketing and liquidity wallet.
- Owner can change gas for processing.
- Owner can update claimWait value.
- Owner can remove limits.
- Owner can manually buyback tokens.

Conclusion

Smart contracts contain low severity issues! Liquidity pair contract's security is not checked due to out of scope.

Liquidity locking details provided by the team: https://dxsale.app/app/v3/dxlplocksearch?id=0&add=0xa4d7D5cDd c27948C30a9E37fb8d242A028D21Bcd&type=lpdefi&chain=BSC

TechRate note:

Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.

