

Axon Finance UXDa Security Audit

Report Version 1.0

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Conducted by **Hunter Security**:

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1 About George Hunter

George Hunter is a leading smart contract security researcher and the founder of Hunter Security. Having conducted over 100 security reviews and reported tens of live smart contract security vulnerabilities protecting over \$1B of TVL, he always strives to deliver top-quality security services to DeFi protocols. For security audit inquiries, you can reach out to him on Telegram or Twitter at [@georgehntr](#).

2 Disclaimer

Audits are a time-, resource-, and expertise-bound effort where trained experts evaluate smart contracts using a combination of automated and manual techniques to identify as many vulnerabilities as possible. Audits can reveal the presence of vulnerabilities **but cannot guarantee their absence**.

3 Risk classification

Severity	Impact: High	Impact: Medium	Impact: Low
Likelihood: High	High	High	Medium
Likelihood: Medium	High	Medium	Low
Likelihood: Low	Medium	Low	Low

3.1 Impact

- **High** - leads to a significant loss of assets in the protocol or significantly harms a group of users.
- **Medium** - involves a small loss of funds or affects a core functionality of the protocol.
- **Low** - encompasses any unexpected behavior that is non-critical.

3.2 Likelihood

- **High** - a direct attack vector; the cost is relatively low compared to the potential loss of funds.
- **Medium** - only a conditionally incentivized attack vector, with a moderate likelihood.
- **Low** - involves too many or unlikely assumptions; offers little to no incentive.

3.3 Actions required by severity level

- **High** - client **must** fix the issue.
- **Medium** - client **should** fix the issue.
- **Low** - client **could** fix the issue.

4 Executive summary

George Hunter was engaged by Axon Finance to review the UXDa stablecoin smart contracts.

Overview

Project Name	Axon Finance, UXDa stablecoin
Repository	https://github.com/axon-finance/axon-smart-contracts
Commit hash	65824ce397486f06843dda99b5bc0cbcf4e91a0b
Resolution	65824ce397486f06843dda99b5bc0cbcf4e91a0b
Methods	Manual review & testing

Scope

contracts/token/Blacklistable.sol
contracts/token/Mintable.sol
contracts/token/UXDa.sol

Issues Found

High risk	0
Medium risk	0
Low risk	0
Informational	1

5 Findings

5.1 Informational

5.1.1 Typographical mistakes, non-critical issues and code-style suggestions

Severity: Informational

Context: .

Description: The contracts contain one or more typographical mistakes, non-critical issues and code-style suggestions. In an effort to keep the report size reasonable, we enumerate these below:

1. Consider whether indexing *_isBlacklisted* of the *Blacklisted* event would be useful.
2. The *blacklist* function can be called passing *false* for a non-blacklisted user or *true* for already blacklisted one. Consider restricting this combination of input and state.
3. Consider checking that *address(0)* cannot be blacklisted since this would block the minting and burning functionalities.
4. The *addMinter* function can be called multiple times for the same minter which would perform an unnecessary *SSTORE* for the *_minters* mapping. Consider whether optimizing or restricting this case would be desired.
5. The *removeMinter* function can be called passing a non-minter address which would emit an unnecessary event. Consider restricting this path.
6. The first line in each NatSpec comment in the *Mintable* contract should begin with a *@dev_* or *@notice_* tag to follow the convention.
7. A typo in the *@dev_ NatSpec comment of _beforeMint_* - should say “before any minting” rather than “after any minting”.

Recommendation: Consider fixing the above typographical mistakes, non-critical issues and code-style suggestions.

Resolution: Acknowledged. No changes were implemented.