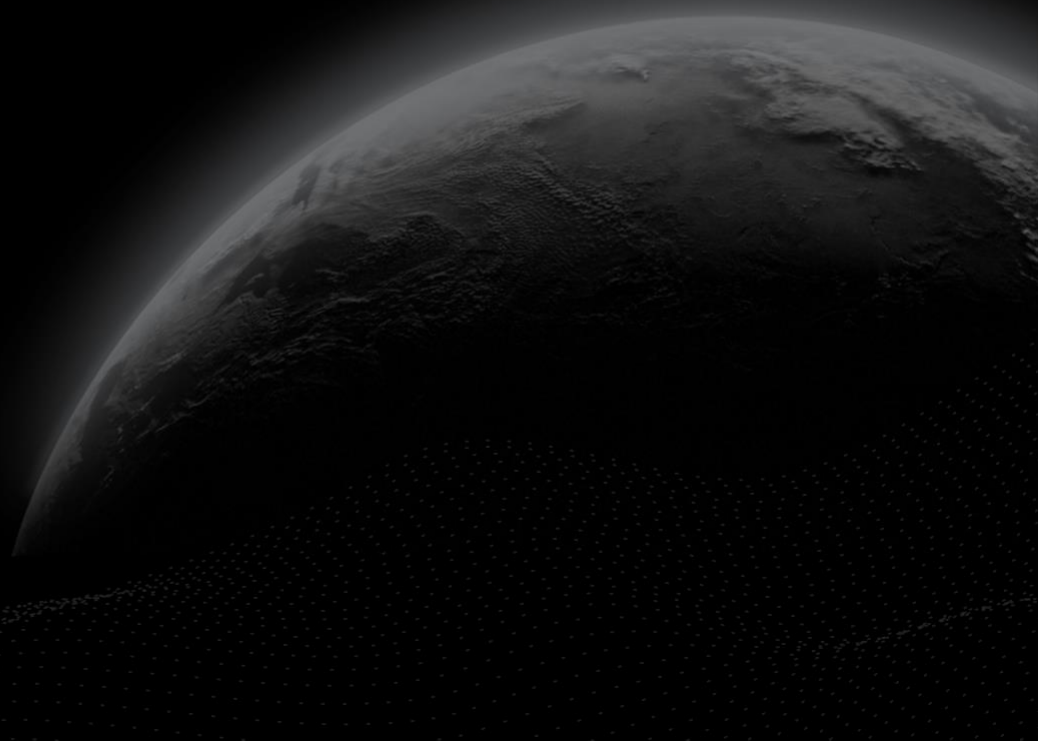
CERTIK

Security Assessment

XRPTurbo

CertiK Assessed on July 1st, 2026



CertiK Assessed on July 1st, 2026

XRPTurbo

The security assessment was prepared by CertiK, the leader in Web3.0 security.

Executive Summary

TYPES
Staking

ECOSYSTEM
XRPL

METHODS
Manual Review

LANGUAGE
Hooks

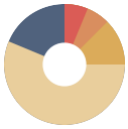
TIMELINE
Delivered on 07/01/2024

KEY COMPONENTS
N/A

CODEBASE
update
base
View All in Codebase Page

COMMITS
207cb3a713e24e2dcffc5e2aca47843df115c3eb
fc14d775d0641ad211f8b44c8cdd1dc1be134a7d
View All in Codebase Page

Vulnerability Summary



4	3	0	0	1	0
Total Findings	Resolved	Mitigated	Partially Resolved	Acknowledged	Declined

3 Informational	3 Resolved		Informational errors are often recommendations to improve the style of the code or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.
1 Major	1 Acknowledged		Major risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.

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CODEBASE | XRPTurbo

Repository

update

base

Commit

207cb3a713e24e2dcffc5e2aca47843df115c3eb

fc14d775d0641ad211f8b44c8cdd1dc1be134a7d

AUDIT SCOPE | XRPTurbo

6 files audited ● 6 files without findings

ID	Report	File	SHA256 Checksum
JET	xrp-turbo/systems	imports/multisig.fc	e5a63d94189cd4393c2c5bf0aadbb511d981325a457b483f9e25dfaf0697c19d3
NOM	xrp-turbo/systems	imports/nominator-proxy-utils.fc	183dabaa7027f486cbc96ceba19fa16bdd569931f74dacfe7b9550c4907dd486
UNS	xrp-turbo/systems	imports/withdraw-request.fc	7027f487af409166a8c43de45503e04fdf0317fba37bba472d958870dbfdc65af
ADM	xrp-turbo/systems	admin_multisig.fc	4b48618aa3cd4c50b457dafc5b16cbf4b61bc84ef40d66cf7736af1c334bb43
FIN	xrp-turbo/systems	financial.fc	383b438293ac6509ad760f6792cc41e993dba31b4cbba8360cef43b10cd46bfa
NOI	xrp-turbo/systems	nominator_proxy.fc	4b3218977225f2fdb1e1edf95ecf3242f87f015ff49a8aeb4eb04b269d63b486

APPROACH & METHODS | XRPTurbo

This report has been prepared for XRPTurbo to discover issues and vulnerabilities in the source code of the XRPTurbo project as well as any system dependencies that were not part of an officially recognized library. A comprehensive examination has been performed, utilizing Manual Review techniques.

The auditing process pays special attention to the following considerations:

- Testing the staking systems against both common and uncommon attack vectors.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Ensuring platform logic meets the specifications and intentions of the client.
- Cross referencing contract structure and implementation against similar systems produced by industry leaders.
- Thorough line-by-line manual review of the entire codebase by industry experts.

The security assessment resulted in findings that ranged from critical to informational. We recommend addressing these findings to ensure a high level of security standards and industry practices. We suggest recommendations that could better serve the project from the security perspective:

- Testing the systems against both common and uncommon attack vectors;
- Enhance general coding practices for better structures of source codes;
- Add enough unit tests to cover the possible use cases;
- Provide more comments per each function for readability, especially systems that are verified in public;
- Provide more transparency on privileged activities once the protocol is live.

SLH-03 | CENTRALIZATION RISKS

Category	Severity	Location	Status
Centralization	**Major**	**financial.fc (base)**	**Acknowledged**

Description

In the system `financial` the role `admin_address` has authority over the functions:

- change `admin_address`, `commission_address`, and `transaction_address`
- change jetton `content`
- change `commission_factor`, which can be set even higher than 100%
- withdraw commission to `commission_address`
- update the `financial` code

The role `transaction_address` can send a transaction from `financial` to any address with any amount with any payload. `xrp_total_supply` is not updated in this case.

Any compromise to the `admin_address` and/or `transaction_address` may allow the hacker to take advantage of this authority and steal all the assets.

It is supposed that `admin_address` and `transaction_address` are controlled by a system with multi-signature functionality. `admin_address` also has a 12-hour timelock.

Recommendation

The risk describes the current project design and potentially makes iterations to improve the security operation and level of decentralization, which in most cases cannot be resolved entirely at the present stage. We advise the client to carefully manage the privileged account's private key to avoid any potential risks of being hacked.

Renouncing the ownership or removing the risky functionality can be considered fully resolved.

Alleviation

[Project Team]: Now `admin_address` and `transaction_address` are managed by multisigs.

SLI-04 | `wallet_id` VARIABLE IS SHADOWED

Category	Severity	Location	Status
Coding Style	Informational	transaction_multisig.fc	Resolved

Description

In `transaction_multisig` the inner scope variable `wallet_id` shadows another one in outer scope. This can lead to confusion.

Recommendation

We recommend avoiding variables shadowing.

SLU-09 | INACCURATE COMMENTS

Category	Severity	Location	Status
Coding Issue	Informational	admin_multisig.fc; nominator_proxy.fc	Resolved

Description

Some comments are inaccurate or outdated. In fact, nothing is triggered on an empty message. In fact, bounced messages are not ignored.

Recommendation

We recommend updating the comments.

SLU-10 | USAGE OF MAGIC NUMBERS

Category	Severity	Location	Status
Coding Style	Informational	admin_multisig.fc; nominator_proxy.fc; withrdaw_request.fc	Resolved

Description

Different magic numbers are used as-is in code.

- `financial` op-codes are used as numbers in `admin_multisig` , `nominator_proxy` , and `withdraw_request`
- Coded are used instead of `ACTION::DEPOSIT` / `ACTION::WITHDRAW` in `nominator_proxy`

Recommendation

We recommend declaring and using constants to improve code maintainability and readability.

OPTIMIZATIONS | XRPTurbo

ID	Title	Category	Severity	Status
SLB-02	No Reason To Parse `in_msg_full`	Fee Optimization	Optimization	Resolved

SLB-02 | NO REASON TO PARSE `in_msg_full`

Category	Severity	Location	Status
Gas Optimization	Optimization	nominator_proxy.fc	Resolved

Description

There is no reason to read `in_msg_full`. No values are used.

Recommendation

We recommend removing the redundant code.

APPENDIX | XRPTurbo

Finding Categories

Categories	Description
Fee Optimization	Fee optimization findings do not affect the functionality of the code but generate different, more optimal EVM opcodes resulting in a reduction on the total gas cost of a transaction.
Coding Style	Coding Style findings may not affect code behavior, but indicate areas where coding practices can be improved to make the code more understandable and maintainable.
Coding Issue	Coding Issue findings are about general code quality including, but not limited to, coding mistakes, compile errors, and performance issues.
Denial of Service	Denial of Service findings indicate that an attacker may prevent the program from operating correctly or responding to legitimate requests.
Inconsistency	Inconsistency findings refer to different parts of code that are not consistent or code that does not behave according to its specification.
Volatile Code	Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases and may result in vulnerabilities.
Logical Issue	Logical Issue findings indicate general implementation issues related to the program logic.
Centralization	Centralization findings detail the design choices of designating privileged roles or other centralized controls over the code.

Checksum Calculation Method

The "Checksum" field in the "Audit Scope" section is calculated as the SHA-256 (Secure Hash Algorithm 2 with digest size of 256 bits) digest of the content of each file hosted in the listed source repository under the specified commit.

The result is hexadecimal encoded and is the same as the output of the Linux "sha256sum" command against the target file.

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