



MOTECH AUDIT

SMART CONTRACT SECURITY AUDIT

SECURITY ASSESSMENT

TERABLOCK TOKEN AUDIT REPORT

2021

12 JAN 2022

SECURITY ASSESMENT

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SUMMARY

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

The auditing process pays special attention to the following considerations:

- Testing the smart contracts against both common and uncommon attack vectors.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Ensuring contract logic meets the specifications and intentions of the client.
- Cross referencing contract structure and implementation against similar smart contracts 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:

- Enhance general coding practices for better structures of source codes;
- Add enough unit tests to cover the possible use cases given they are currently missing in the repository;
- Provide more comments per each function for readability, especially contracts are verified in public;
- Provide more transparency on privileged activities once the protocol is live.



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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.



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BACKGROUND

MotechAudit was commissioned by TeraBlock to perform an audit of smart contracts:

<https://bscscan.com/address/0xA953736904e23Fafb42e353D412242089999999999>

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.



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AUDIT DETAILS



AUDITED PROJECT

TeraBlock



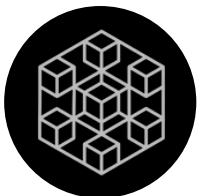
DEPLOYER ADDRESS

0xdc16e70C2b8a43952B89365437f07bB9D207B399



CLIENT CONTACTS:

TeraBlock team



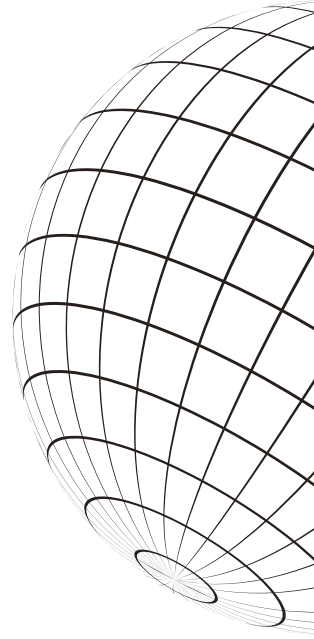
BLOCKCHAIN

Binance Smart Chain Project



WEBSITE:

<https://terablock.ai>

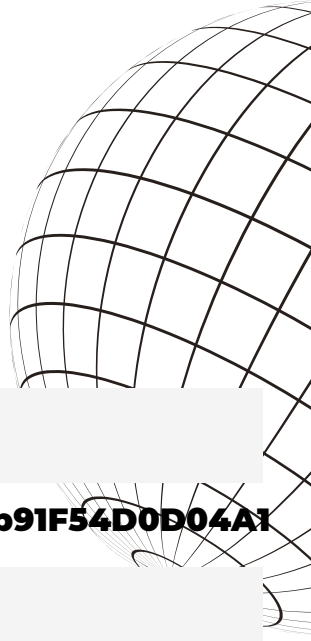


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CONTRACT DETAILS

Token contract details for Sep-20-2021



Contract name	TeraBlock
Contract address	0x9798dF2f5d213a872c787bD03b2b91F54D0D04A1
Total supply	398,094,767 TBC
Token ticker	TeraBlock Token (TBC)
Decimals	18
Token holders	6,614
Transactions count	18,579
Top 100 holders dominance	98.64%
Contract deployer address	0xbaAa8e1eb8d4A7640EC3e973c07c04F5672c6fc5
Contract's current owner address	0x80869CeF77E60312E09b89575e7486560fB51B08

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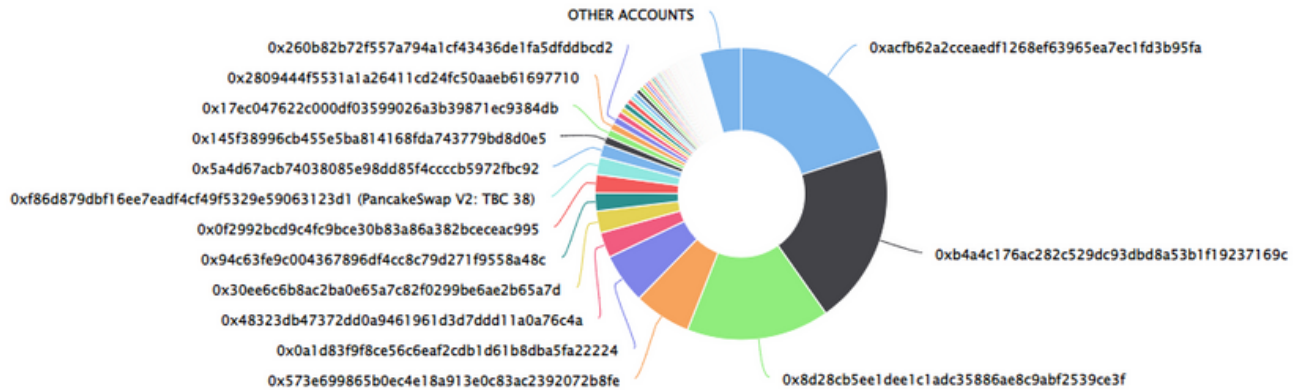
TERABLOCK TOKEN DISTRIBUTION

The top 100 holders collectively own 95.42% (379,852,344.07 Tokens) of TeraBlock Token

Token Total Supply: 398,094,767.00 Token | Total Token Holders: 6,614

TeraBlock Token Top 100 Token Holders

Source: BscScan.com



(A total of 379,852,344.07 tokens held by the top 100 accounts from the total supply of 398,094,767.00 token)

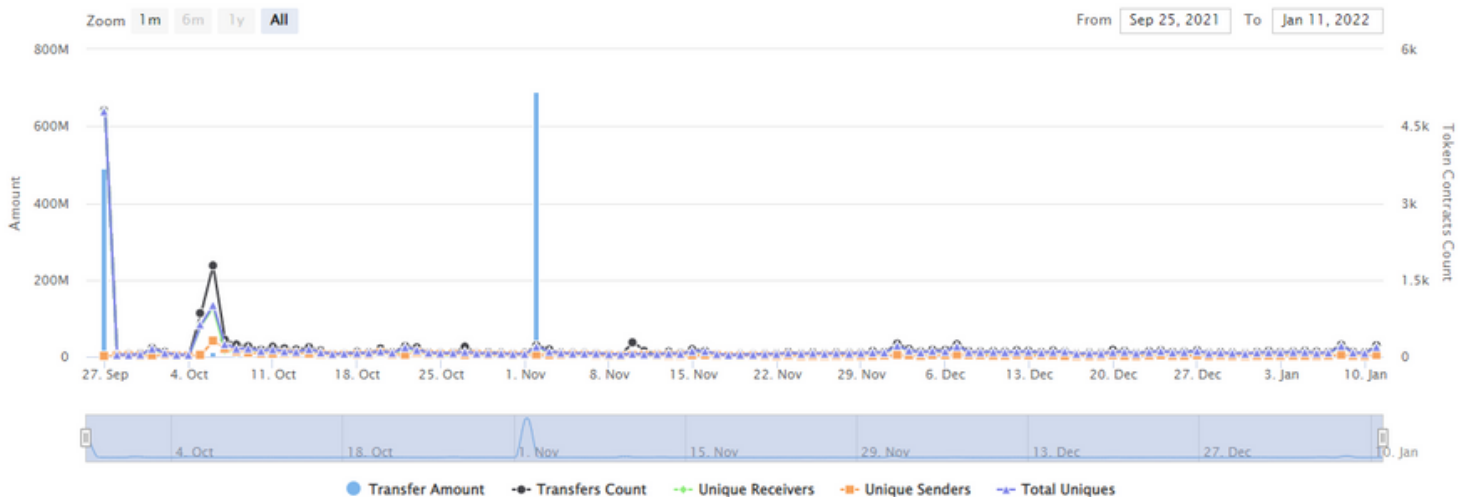
TERABLOCK TOKEN CONTRACT INTERACTION DETAILS

Time Series: Token Contract Overview

Mon 27, Sept 2021 - Tue 11, Jan 2022

Token Contract 0x9798df2f5d213a872c787bD03b2b91F54D0D04A1 (TeraBlock Token)




















Source: BscScan.com



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TOP 10 TOKEN HOLDERS

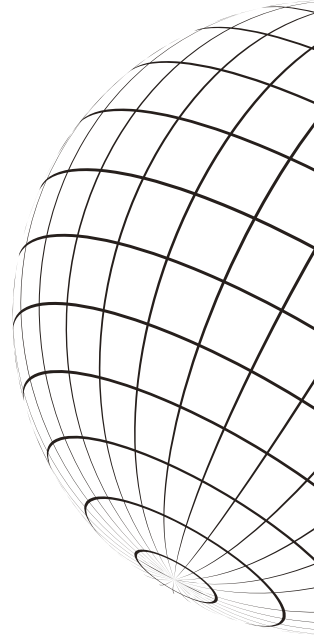
Rank	Address	Quantity	Percentage	Value	Analytics
1	 0xacfb62a2cceaedf1268ef63965ea7ec1fd3b95fa	80,000,000	<u>20.0957%</u>	\$754,896.26	
2	 0xb4a4c176ac282c529dc93dbd8a53b1f19237169c	80,000,000	<u>20.0957%</u>	\$754,896.26	
3	 0x8d28cb5ee1dee1c1adc35886ae8c9abf2539ce3f	63,040,000	<u>15.8354%</u>	\$594,858.25	
4	 0x573e699865b0ec4e18a913e0c83ac2392072b8fe	25,216,000	<u>6.3342%</u>	\$237,943.30	
5	 0x0a1d83f9f8ce56c6eaf2cdb1d61b8dba5fa22224	22,000,000	<u>5.5263%</u>	\$207,596.47	
6	 0x48323db47372dd0a9461961d3d7ddd11a0a76c4a	11,200,000	<u>2.8134%</u>	\$105,685.48	
7	0x30ee6c6b8ac2ba0e65a7c82f0299be6ae2b65a7d	9,610,160	<u>2.4140%</u>	\$90,683.42	
8	 0x94c63fe9c004367896df4cc8c79d271f9558a48c	8,000,000	<u>2.0096%</u>	\$75,489.63	
9	 0x0f2992bcd9c4fc9bce30b83a86a382bceceac995	8,000,000	<u>2.0096%</u>	\$75,489.63	
10	 PancakeSwap V2: TBC 38	7,736,975.20846407689715684	<u>1.9435%</u>	\$73,007.67	

source:<https://bscscan.com/>



SECURITY ASSESSMENT

SECURITY ISSUES



✓ Critical Severity Issues
No high severity issues found.

✓ High Severity Issues
No high severity issues found.

⚠ Medium Severity Issues
1. Admin could mint unlimited

Admin could mint any amount of tokens to any address at any time. Unlimited supply could be very risky for the market price.

Recommendation: please make sure the community is informed about the unlimited token supply.

Lines: TeraBlockToken.sol#13-15

```
function mint(address to, uint256 amount) external onlyAdmin
whenNotPaused {
    _mint(to, amount);
}
```

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SECURITY ISSUES



Customer Comments: The admin owned mint and burn functions in the contracts is an intended functionality.

The vision of the project is to go multi-chain and also to enable multi-chain transfers using a single bridge, rather than the conventional dual chain bridges.

However, to achieve transparency in the system - the admin address would be whitelisted and monitored for every transaction being done. TeraBlock's official website will have a dedicated 'ecosystem transparency' section with complete details about the total supply, circulating supplies on different chains and also admins transactions' watcher. Hence, ensuring trust and transparency.

! Low Severity Issues

1. A public function that could be declared external

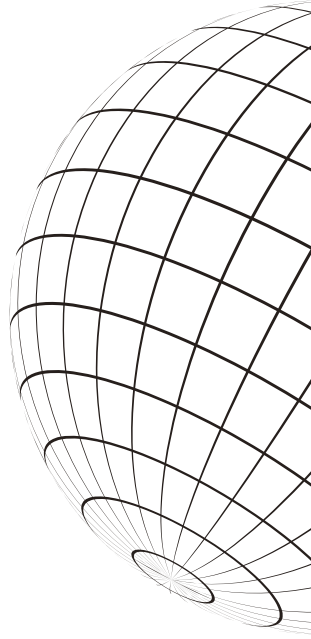
public functions that are never called by the contract should be declared external to save gas.

Recommendation: Use the external attribute for functions never called from the contract.

Lines: `AccessProtected.sol#29`

```
function isAdmin(address admin) public view returns (bool) {
```

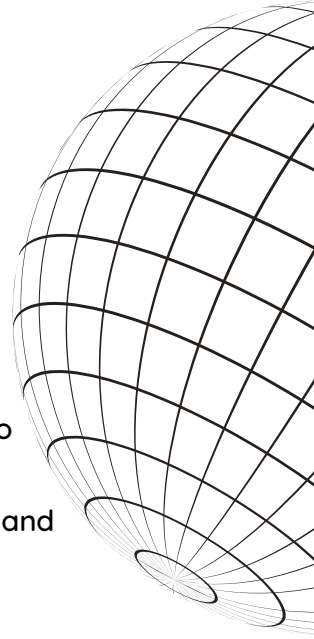
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SECURITY ASSESMENT CONCLUSION

Smart contracts contain owner privileges!

Motech Audit 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.



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