



# PiBridge Token Smart Contract Audit Report

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# AUDITED DETAILS

## Audited Project

Project name	Token ticker	Blockchain
PiBridge Token	PiB	Binance Smart Chain

## Addresses

Contract address	0x45b19b46be1b9006f388873e2c460fcc7d00f15
Contract deployer address	0xE767f1574862289F1C3a88369928BB370699fe7C

## Project Website

<a href="https://pibridge.org/">https://pibridge.org/</a>
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## Codebase

<a href="https://bscscan.com/address/0x45b19b46be1b9006f388873e2c460fcc7d00f15#code">https://bscscan.com/address/0x45b19b46be1b9006f388873e2c460fcc7d00f15#code</a>
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# SUMMARY

PiBridge is a hybrid all-in-one financial application platform combining both DEX and CEX models with multi-chain & cross-chain AMM, farming, lending, fundraising platform (launchpad), prediction, NFT, and more features. All products will be developed with Pi Network as the base.

## Contract Summary

### Documentation Quality

PiBridge Token provides a very good documentation with standard of solidity base code.

- The technical description is provided clearly and structured and also don't have any high risk issue.

### Code Quality

The Overall quality of the basecode is standard.

- Standard solidity basecode and rules are already followed by PiBridge Token with the discovery of several low issues.

### Test Coverage

Test coverage of the project is 100% ( Through Codebase )

## Audit Findings Summary

- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 11, 57, 286, 336, 363, 470, 548, 633, 663, 1048, 1089 and 1284.

## CONCLUSION

We have audited the PiBridge Token project released on October 2022 to discover issues and identify potential security vulnerabilities in PiBridge Token Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

The security audit report provides satisfactory results with low-risk issues.

The issues found in the PiBridge Token smart contract code do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues are some arithmetic operation issues, and a floating pragma is set. Specifying a fixed compiler version is recommended to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

# AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	PASS
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	PASS
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	PASS
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	ISSUE FOUND
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	PASS
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	PASS
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	PASS
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses.	PASS

DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	PASS
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	PASS
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas grieving attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS

Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS



# SMART CONTRACT ANALYSIS

Started	Wednesday Oct 05 2022 06:47:47 GMT+0000 (Coordinated Universal Time)
Finished	Thursday Oct 06 2022 05:52:28 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	PiBridgeToken.sol

## Detected Issues

[illegible]

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 11

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
10
11  pragma solidity ^0.8.0;
12
13  /**
14   * @title Counters
15
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 57

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
56
57  pragma solidity ^0.8.0;
58
59  /**
60   * @dev Standard math utilities missing in the Solidity language.
61
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 286

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
285
286  pragma solidity ^0.8.0;
287
288
289  /**
290
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 336

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
335
336  pragma solidity ^0.8.0;
337
338  /**
339   * @dev Provides information about the current execution context, including the
340
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 363

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
362
363  pragma solidity ^0.8.0;
364
365
366  /**
367
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 470

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
469
470  pragma solidity ^0.8.0;
471
472
473  /**
474
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 548

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
547
548  pragma solidity ^0.8.0;
549
550  /**
551   * @dev Interface of the ERC20 standard as defined in the EIP.
552
```



## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 633

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
632
633  pragma solidity ^0.8.0;
634
635
636  /**
637
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 663

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
662
663  pragma solidity ^0.8.0;
664
665
666
667
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 1048

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
1047
1048  pragma solidity ^0.8.0;
1049
1050
1051
1052
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 1089

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
1088
1089  pragma solidity ^0.8.0;
1090
1091
1092
1093
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 1284

### low SEVERITY

The current pragma Solidity directive is `""^0.8.4""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- PiBridgeToken.sol

### Locations

```
1283
1284  pragma solidity ^0.8.4;
1285
1286
1287
1288
```

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