



# SpacePi Token Smart Contract Audit Report

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# AUDITED DETAILS

## Audited Project

Project name	Token ticker	Blockchain
SpacePi Token	SpacePi	Binance Smart Chain

## Addresses

Contract address	0x69b14e8d3cebfdd8196bfe530954a0c226e5008e
Contract deployer address	0xFfe9b9612edCf2a60f9E5C879d278DEC7EEe08c9

## Project Website

<https://space-pi.com/#/>

## Codebase

<https://bscscan.com/address/0x69b14e8d3cebfdd8196bfe530954a0c226e5008e#code>

# SUMMARY

SpacePi is committed to being the best Pi ecological community, and has launched PiBadge, SPI-NFT, BTCPI and SPI-SWAP . (CMC & CG)

## Contract Summary

### Documentation Quality

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

- The technical description is provided clearly and structured and also dont have any high risk issue.

### Code Quality

The Overall quality of the basecode is standard.

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

### Test Coverage

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

## Audit Findings Summary

- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 110, 127, 149, 150, 169 and 188.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 5, 84, 194 and 424.

## CONCLUSION

We have audited the SpacePi Token project released on December 2022 to discover issues and identify potential security vulnerabilities in SpacePi 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 SpacePi 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. The current pragma Solidity directive is `^0.5.0`. 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.

# 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.	ISSUE FOUND
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 griefing 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 <code>abi.encodePacked()</code> with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The <code>transfer()</code> and <code>send()</code> 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	Saturday Dec 03 2022 23:40:29 GMT+0000 (Coordinated Universal Time)
Finished	Sunday Dec 04 2022 21:01:16 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	SpacePiERC20Token.sol

## Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "%" DISCOVERED	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged

## SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 110

### low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

### Source File

- SpacePiERC20Token.sol

### Locations

```
109  function add(uint256 a, uint256 b) internal pure returns (uint256) {
110  uint256 c = a + b;
111  require(c >= a, "SafeMath: addition overflow");
112
113  return c;
114
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 127

## low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

## Source File

- SpacePiERC20Token.sol

## Locations

```
126   require(b <= a, "SafeMath: subtraction overflow");
127   uint256 c = a - b;
128
129   return c;
130   }
131
```

## SWC-101 | ARITHMETIC OPERATION "\*" DISCOVERED

LINE 149

### low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

### Source File

- SpacePiERC20Token.sol

### Locations

```
148
149  uint256 c = a * b;
150  require(c / a == b, "SafeMath: multiplication overflow");
151
152  return c;
153
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 150

## low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

## Source File

- SpacePiERC20Token.sol

## Locations

```
149     uint256 c = a * b;
150     require(c / a == b, "SafeMath: multiplication overflow");
151
152     return c;
153 }
154
```

## SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 169

### low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

### Source File

- SpacePiERC20Token.sol

### Locations

```
168     require(b > 0, "SafeMath: division by zero");
169     uint256 c = a / b;
170     // assert(a == b * c + a % b); // There is no case in which this doesn't hold
171
172     return c;
173
```

## SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 188

### low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

### Source File

- SpacePiERC20Token.sol

### Locations

```
187     require(b != 0, "SafeMath: modulo by zero");
188     return a % b;
189 }
190 }
191
192
```

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

LINE 5

### low SEVERITY

The current pragma Solidity directive is ""^0.5.0"". 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

- SpacePiERC20Token.sol

### Locations

```
4
5  pragma solidity ^0.5.0;
6
7  /**
8   * @dev Interface of the ERC20 standard as defined in the EIP. Does not include
9
```



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

LINE 84

### low SEVERITY

The current pragma Solidity directive is ""^0.5.0"". 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

- SpacePiERC20Token.sol

### Locations

```
83
84  pragma solidity ^0.5.0;
85
86  /**
87   * @dev Wrappers over Solidity's arithmetic operations with added overflow
88
```

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

LINE 194

### low SEVERITY

The current pragma Solidity directive is `^0.5.0`. 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

- SpacePiERC20Token.sol

### Locations

```
193
194  pragma solidity ^0.5.0;
195
196
197
198
```

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

LINE 424

### low SEVERITY

The current pragma Solidity directive is ""^0.5.0"". 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

- SpacePiERC20Token.sol

### Locations

```
423
424  pragma solidity ^0.5.0;
425
426
427  /**
428
```

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