

ZeroXPad
Smart Contract

Audit Report





# **TABLE OF CONTENTS**

### | Audited Details

- Audited Project
- Blockchain
- Addresses
- Project Website
- Codebase

### Summary

- Contract Summary
- Audit Findings Summary
- Vulnerabilities Summary

### Conclusion

### | Audit Results

### Smart Contract Analysis

- Detected Vulnerabilities
- | Disclaimer
- About Us



# **AUDITED DETAILS**

### | Audited Project

Project name	Token ticker	Blockchain	
ZeroXPad	ZXP	Binance Smart Chain	

### Addresses

Contract address	0xBBB603Da8A209188B1d083a6f7a6f66D4992a5f4
Contract deployer address	0x488A8CA56f29BFbe28e6f4cf898D5c3C1455deDa

### Project Website

https://www.0xpad.app/

### Codebase

https://bscscan.com/address/0xBBB603Da8A209188B1d083a6f7a6f66D4992a5f4#code



### **SUMMARY**

Oxpad is a hybrid fundraiser fusing marketing along an innovative borrow mechanism to raise funds for startups, guarantee returns for investors, in addition to introducing the CBC standard.

### Contract Summary

#### **Documentation Quality**

ZeroXPad 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 ZeroXPad 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 283, 301, 320, 321, 338, 354, 369, 383, 397, 411, 427, 450, 473, 499, 943, 973, 1009, 1012, 1034, 1037, 1063, 1065, 1118, 1235, 1379 and 1395.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 9, 172, 223, 259, 508, 534, 623, 714, 742, 1168 and 1206.



# CONCLUSION

We have audited the ZeroXPad project released on January 2023 to discover issues and identify potential security vulnerabilities in ZeroXPad Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

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

The issues found in the code on ZeroXPad smart contract 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 found are some arithmetic operation issues and floating pragmas set on multiple lines.



# **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.		
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	
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	
Assert Violation	SWC-110	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 Caller	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
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
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



# **SMART CONTRACT ANALYSIS**

Started	Thursday Jan 26 2023 18:54:50 GMT+0000 (Coordinated Universal Time)		
Finished	Friday Jan 27 2023 19:43:57 GMT+0000 (Coordinated Universal Time)		
Mode	Standard		
Main Source File	ZeroXPad.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-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-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-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-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-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-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



**LINE 283** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
282 unchecked {
283 uint256 c = a + b;
284 if (c < a) return (false, 0);
285 return (true, c);
286 }
287
```



**LINE 301** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
300 if (b > a) return (false, 0);
301 return (true, a - b);
302 }
303 }
304
305
```



**LINE 320** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
319  if (a == 0) return (true, 0);
320  uint256 c = a * b;
321  if (c / a != b) return (false, 0);
322  return (true, c);
323  }
324
```



**LINE 321** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
320  uint256 c = a * b;
321  if (c / a != b) return (false, 0);
322  return (true, c);
323  }
324  }
325
```



**LINE 338** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
337  if (b == 0) return (false, 0);
338  return (true, a / b);
339  }
340  }
341
342
```



**LINE 354** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
353  if (b == 0) return (false, 0);
354  return (true, a % b);
355  }
356  }
357
358
```



**LINE 369** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol



**LINE 383** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
382 function sub(uint256 a, uint256 b) internal pure returns (uint256) {
383    return a - b;
384  }
385
386  /**
387
```



**LINE 397** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
396  function mul(uint256 a, uint256 b) internal pure returns (uint256) {
397   return a * b;
398  }
399
400  /**
401
```



**LINE 411** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
410 function div(uint256 a, uint256 b) internal pure returns (uint256) {
411  return a / b;
412 }
413
414  /**
415
```



**LINE 427** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
426  function mod(uint256 a, uint256 b) internal pure returns (uint256) {
427  return a % b;
428  }
429
430  /**
431
```



**LINE 450** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
449  require(b <= a, errorMessage);
450  return a - b;
451  }
452  }
453
454</pre>
```



**LINE 473** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
472 require(b > 0, errorMessage);
473 return a / b;
474 }
475 }
476
477
```



**LINE** 499

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
498  require(b > 0, errorMessage);
499  return a % b;
500  }
501  }
502  }
503
```



**LINE 943** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
942 address owner = _msgSender();
943 _approve(owner, spender, allowance(owner, spender) + addedValue);
944 return true;
945 }
946
947
```



**LINE 973** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
972 unchecked {
973  _approve(owner, spender, currentAllowance - subtractedValue);
974  }
975
976  return true;
977
```



**LINE 1009** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1008 unchecked {
1009    _balances[from] = fromBalance - amount;
1010    // Overflow not possible: the sum of all balances is capped by totalSupply, and
the sum is preserved by
1011    // decrementing then incrementing.
1012    _balances[to] += amount;
1013
```



**LINE 1012** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1011  // decrementing then incrementing.
1012  _balances[to] += amount;
1013  }
1014
1015  emit Transfer(from, to, amount);
1016
```



**LINE 1034** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1033
1034 _totalSupply += amount;
1035 unchecked {
1036 // Overflow not possible: balance + amount is at most totalSupply + amount, which is checked above.
1037 _balances[account] += amount;
1038
```



**LINE 1037** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1036  // Overflow not possible: balance + amount is at most totalSupply + amount, which
is checked above.
1037  _balances[account] += amount;
1038  }
1039  emit Transfer(address(0), account, amount);
1040
1041
```



**LINE 1063** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1062 unchecked {
1063   _balances[account] = accountBalance - amount;
1064   // Overflow not possible: amount <= accountBalance <= totalSupply.
1065   _totalSupply -= amount;
1066  }
1067</pre>
```



**LINE 1065** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1064  // Overflow not possible: amount <= accountBalance <= totalSupply.
1065  _totalSupply -= amount;
1066  }
1067
1068  emit Transfer(account, address(0), amount);
1069</pre>
```



**LINE 1118** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1117 unchecked {
1118 _approve(owner, spender, currentAllowance - amount);
1119 }
1120 }
1121 }
1122
```



**LINE 1235** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1234 require(
1235 ERC20.totalSupply() + amount <= cap(),
1236  "ERC20Capped: cap exceeded"
1237 );
1238 super._mint(account, amount);
1239</pre>
```



**LINE 1379** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1378    uint256 fees = amount.mul(buyFee_).div(10000);
1379    uint256 rest = amount - fees;
1380
1381    super._transfer(from, treasury_, fees);
1382    super._transfer(from, to, rest);
1383
```



**LINE 1395** 

#### **low SEVERITY**

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

#### Source File

- ZeroXPad.sol

```
1394
1395    uint256    rest = amount - fees;
1396    super._transfer(from, treasury_, fees);
1397    super._transfer(from, to, rest);
1398    } else {
1399
```



LINE 9

#### **low SEVERITY**

The current pragma Solidity directive is "">=0.6.2"". 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

- ZeroXPad.sol

```
8
9  pragma solidity >=0.6.2;
10
11  interface IUniswapV2Router01 {
12  function factory() external pure returns (address);
13
```



**LINE 172** 

#### **low SEVERITY**

The current pragma Solidity directive is "">=0.6.2"". 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

- ZeroXPad.sol

```
171
172 pragma solidity >=0.6.2;
173
174 interface IUniswapV2Router02 is IUniswapV2Router01 {
175 function removeLiquidityETHSupportingFeeOnTransferTokens(
176
```



**LINE 223** 

#### **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

- ZeroXPad.sol

```
222
223 pragma solidity >=0.5.0;
224
225 interface IUniswapV2Factory {
226 event PairCreated(
227
```



**LINE 259** 

#### **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

- ZeroXPad.sol

```
258
259 pragma solidity ^0.8.0;
260
261 // CAUTION
262 // This version of SafeMath should only be used with Solidity 0.8 or later,
263
```



**LINE 508** 

#### **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

- ZeroXPad.sol

```
507
508 pragma solidity ^0.8.0;
509
510 /**
511 * @dev Provides information about the current execution context, including the
512
```



**LINE 534** 

#### **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

- ZeroXPad.sol

```
533
534 pragma solidity ^0.8.0;
535
536 /**
537 * @dev Contract module which provides a basic access control mechanism, where
538
```



**LINE 623** 

#### **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

- ZeroXPad.sol

```
622
623 pragma solidity ^0.8.0;
624
625 /**
626 * @dev Interface of the ERC20 standard as defined in the EIP.
627
```



**LINE 714** 

#### **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

- ZeroXPad.sol

```
713
714 pragma solidity ^0.8.0;
715
716 /**
717 * @dev Interface for the optional metadata functions from the ERC20 standard.
718
```



**LINE 742** 

#### **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

- ZeroXPad.sol

```
741
742 pragma solidity ^0.8.0;
743
744 /**
745 * @dev Implementation of the {IERC20} interface.
746
```



**LINE 1168** 

#### **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

- ZeroXPad.sol

```
1167
1168 pragma solidity ^0.8.0;
1169
1170 /**
1171 * @dev Extension of {ERC20} that allows token holders to destroy both their own
1172
```



**LINE 1206** 

#### **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

- ZeroXPad.sol

```
1205
1206 pragma solidity ^0.8.0;
1207
1208 /**
1209 * @dev Extension of {ERC20} that adds a cap to the supply of tokens.
1210
```



# **DISCLAIMER**

This report is subject to the terms and conditions (including without limitation, description of services, confidentiality, disclaimer and limitation of liability) set forth in the Services Agreement, or the scope of services, and terms and conditions provided to you ("Customer" or the "Company") in connection with the Agreement. This report provided in connection with the Services set forth in the Agreement shall be used by the Company only to the extent permitted under the terms and conditions set forth in the Agreement. This report may not be transmitted, disclosed, referred to, or relied upon by any person for any purposes, nor may copies be delivered to any other person other than the Company, without Sysfixed's prior written consent in each instance.

This report is not, nor should be considered, an "endorsement" or "disapproval" of any particular project or team. This report is not, nor should be considered, an indication of the economics or value of any "product" or "asset" created by any team or project that contracts Sysfixed to perform a security assessment. This report does not provide any warranty or guarantee regarding the absolute bug-free nature of the technology analyzed, nor do they provide any indication of the technologies proprietors, business, business model, or legal compliance.

This is a limited report on our findings based on our analysis, in accordance with good industry practice as of 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.

This report should not be used in any way to make decisions around investment or involvement with any particular project. This report in no way provides investment advice, nor should be leveraged as investment advice of any sort. This report represents an extensive assessing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology.

This report is provided for information purposes only and on a non-reliance basis and does not constitute investment advice. No one shall have any right to rely on the report or its contents, and Sysfixed and its affiliates (including holding companies, shareholders, subsidiaries, employees, directors, officers, and other representatives) (Sysfixed) owe no duty of care.



# **ABOUT US**

Sysfixed is a blockchain security certification organization established in 2021 with the objective to provide smart contract security services and verify their correctness in blockchain-based protocols. Sysfixed automatically scans for security vulnerabilities in Ethereum and other EVM-based blockchain smart contracts. Sysfixed a comprehensive range of analysis techniques—including static analysis, dynamic analysis, and symbolic execution—can accurately detect security vulnerabilities to provide an in-depth analysis report. With a vibrant ecosystem of world-class integration partners that amplify developer productivity, Sysfixed can be utilized in all phases of your project's lifecycle. Our team of security experts is dedicated to the research and improvement of our tools and techniques used to fortify your code.