



# EthereumMax Smart Contract Audit Report

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# AUDITED DETAILS

## Audited Project

Project name	Token ticker	Blockchain
EthereumMax	EMAX	Arbitrum

## Addresses

Contract address	0x123389C2f0e9194d9bA98c21E63c375B67614108
Contract deployer address	0x331626d097cc466f6544257c2Dc18f60f6382414

## Project Website

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

<a href="https://arbiscan.io/address/0x123389C2f0e9194d9bA98c21E63c375B67614108#code">https://arbiscan.io/address/0x123389C2f0e9194d9bA98c21E63c375B67614108#code</a>
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# SUMMARY

EthereumMax (EMAX) is a progressive ERC-20 token built on the secure Ethereum network. We launched EMAX with a vision to bridge the gap between the emergence of community-driven tokens and the well-known foundational coins of crypto, creating a unique token that provides lifestyle perks with financial rewards and incentives to its holders with a pathway for practical long-term use in everyday life. This is the essence of the Culture Token.

## | Contract Summary

### **Documentation Quality**

EthereumMax 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 EthereumMax with the discovery of several low issues.

### **Test Coverage**

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

## | Audit Findings Summary

- SWC-100 SWC-108 | Explicitly define visibility for all state variables on lines 558 and 588.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 42, 58, 68, 69, 84, 100, 807, 813, 938, 952, 977, 991, 995, 996, 1021, 1075, 1099 and 1107.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 6.
- SWC-110 SWC-123 | It is recommended to use of revert(), assert(), and require() in Solidity, and the new REVERT opcode in the EVM on lines 892, 893, 897, 897, 1076, 1100, 1101 and 1108.
- SWC-120 | It is recommended to use external sources of randomness via oracles on lines 807, 813 and 1034.

## CONCLUSION

We have audited the EthereumMax project released in February 2022 to discover issues and identify potential security vulnerabilities in EthereumMax 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 a satisfactory result with some low-risk issues.

The issues found in the EthereumMax 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 found are some arithmetic operation issues, a floating pragma is set, a state variable visibility is not set, weak sources of randomness, and out-of-bounds array access which the index access expression can cause an exception in case of the use of an invalid array index value. The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

# 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.	ISSUE FOUND
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.	ISSUE FOUND
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.	ISSUE FOUND
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 Feb 23 2022 04:20:06 GMT+0000 (Coordinated Universal Time)
Finished	Thursday Feb 24 2022 15:34:55 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	EMAX.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

<b>SWC-101</b>	ARITHMETIC OPERATION "++" DISCOVERED	<b>low</b>	acknowledged
<b>SWC-101</b>	ARITHMETIC OPERATION "++" DISCOVERED	<b>low</b>	acknowledged
<b>SWC-101</b>	ARITHMETIC OPERATION "++" DISCOVERED	<b>low</b>	acknowledged
<b>SWC-101</b>	ARITHMETIC OPERATION "++" DISCOVERED	<b>low</b>	acknowledged
<b>SWC-103</b>	A FLOATING PRAGMA IS SET.	<b>low</b>	acknowledged
<b>SWC-108</b>	STATE VARIABLE VISIBILITY IS NOT SET.	<b>low</b>	acknowledged
<b>SWC-108</b>	STATE VARIABLE VISIBILITY IS NOT SET.	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
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<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
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<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-110</b>	OUT OF BOUNDS ARRAY ACCESS	<b>low</b>	acknowledged
<b>SWC-120</b>	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	<b>low</b>	acknowledged
<b>SWC-120</b>	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	<b>low</b>	acknowledged
<b>SWC-120</b>	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	<b>low</b>	acknowledged

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 42

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
41  function add(uint256 a, uint256 b) internal pure returns (uint256) {  
42  uint256 c = a + b;  
43  require(c >= a, "SafeMath: addition overflow");  
44  
45  return c;  
46
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 58

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
57   require(b <= a, errorMessage);  
58   uint256 c = a - b;  
59  
60   return c;  
61   }  
62
```

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

LINE 68

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
67
68  uint256 c = a * b;
69  require(c / a == b, "SafeMath: multiplication overflow");
70
71  return c;
72
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 69

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
68  uint256 c = a * b;  
69  require(c / a == b, "SafeMath: multiplication overflow");  
70  
71  return c;  
72  }  
73
```

# SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 84

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
83  require(b > 0, errorMessage);  
84  uint256 c = a / b;  
85  // assert(a == b * c + a % b); // There is no case in which this doesn't hold  
86  
87  return c;  
88
```

# SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 100

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
99  require(b != 0, errorMessage);
100  return a % b;
101  }
102  }
103
104
```



# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 807

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
806 //antibot - first X blocks
807 if (launchedAt > 0 && (launchedAt + deadBlocks) > block.number) {
808     _isSniper[to] = true;
809 }
810
811
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 813

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
812     if (  
813         launchedAt > 0 && from != owner() && block.number <= (launchedAt + deadBlocks) &&  
            antiBotmode  
814     ) {  
815         currenttotalFee = 900; //90%  
816     }  
817
```

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

LINE 938

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
937
938  _balances[recipient] += amount;
939
940  emit Transfer(sender, recipient, amount);
941  }
942
```

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

LINE 952

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
951     } else {  
952         uint256 calculatedFee = tAmount.mul(curentTotalFee).div(10**3);  
953         uint256 amountForRecipient = tAmount.sub(calculatedFee);  
954         _sendTransfer(sender, recipient, amountForRecipient);  
955         _sendTransfer(sender, address(this), calculatedFee);  
956     }
```

# SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 977

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
976     require(to != address(0) && to != address(this), "Emax/invalid-address");
977     _balances[to] = _balances[to] + value; // note: we don't need an overflow check
here b/c balanceOf[to] <= _totalSupply and there is an overflow check below
978     _totalSupply = _totalSupply.add(value);
979     emit Transfer(address(0), to, value);
980 }
981
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 991

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
990
991  _allowances[from][msg.sender] = allowed - value;
992  }
993  }
994
995
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 995

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
994
995  _balances[from] = balance - value; // note: we don't need overflow checks b/c
require(balance >= value) and balance <= totalSupply
996  _totalSupply = _totalSupply - value;
997
998  emit Transfer(from, address(0), value);
999
```

# SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 996

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
995  _balances[from] = balance - value; // note: we don't need overflow checks b/c
require(balance >= value) and balance <= totalSupply
996  _totalSupply = _totalSupply - value;
997
998  emit Transfer(from, address(0), value);
999  }
1000
```



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

LINE 1021

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
1020    chainId == deploymentChainId ? _DOMAIN_SEPARATOR :  
_calculateDomainSeparator(chainId),  
1021    keccak256(abi.encode(PERMIT_TYPEHASH, owner, spender, value, nonces[owner]++,  
deadline))  
1022    )  
1023    );  
1024  
1025
```

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

LINE 1075

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
1074 function excludeMultiple(address[] calldata addresses) external onlyOwner {
1075     for (uint256 i; i < addresses.length; ++i) {
1076         _isExcludedFromFee[addresses[i]] = true;
1077     }
1078     emit ExcludeMultiple(addresses, true);
1079 }
```

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

LINE 1099

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
1098     ) external onlyOwner {
1099     for (uint256 i; i < addresses.length; ++i) {
1100     require(!_isTrusted[addresses[i]] || _override, "account is already trusted use
override");
1101     _isSniper[addresses[i]] = status;
1102     }
1103 }
```

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

LINE 1107

## low SEVERITY

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

## Source File

- EMAX.sol

## Locations

```
1106     function manage_trusted(address[] calldata addresses, bool status) external
onlyOwner {
1107     for (uint256 i; i < addresses.length; ++i) {
1108         _isTrusted[addresses[i]] = status;
1109     }
1110     emit Manage_trusted(addresses, status);
1111 }
```

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

LINE 6

### low SEVERITY

The current pragma Solidity directive is `""^0.6.11""`. 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

- EMAX.sol

### Locations

```
5 // SPDX-License-Identifier: MIT
6 pragma solidity ^0.6.11;
7
8 abstract contract Context {
9     function _msgSender() internal view virtual returns (address payable) {
10
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 558

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "DEAD" is internal. Other possible visibility settings are public and private.

### Source File

- EMAX.sol

### Locations

```
557
558 address DEAD = 0x0000000000000000000000000000000000000000000000000000000000000000dEaD;
559
560 uint8 private constant _decimals = 18;
561
562
```

## SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 588

### low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "inSwap" is internal. Other possible visibility settings are public and private.

### Source File

- EMAX.sol

### Locations

```
587
588  bool inSwap;
589
590  bool public tradingOpen = false;
591  bool public zeroBuyTax = true;
592
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 892

### low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

### Source File

- EMAX.sol

### Locations

```
891     address[] memory path = new address[](2);
892     path[0] = address(this);
893     path[1] = RouterV2.WETH();
894
895     _approve(address(this), address(RouterV2), tokenAmount);
896
```



## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 893

### low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

### Source File

- EMAX.sol

### Locations

```
892  path[0] = address(this);  
893  path[1] = RouterV2.WETH();  
894  
895  _approve(address(this), address(RouterV2), tokenAmount);  
896  uint256[] memory amount = RouterV2.getAmountsOut(tokenAmount, path);  
897
```

# SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 897

## low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

## Source File

- EMAX.sol

## Locations

```
896  uint256[] memory amount = RouterV2.getAmountsOut(tokenAmount, path);
897  uint256 amountMin = amount[1].sub(amount[1].div(50));
898
899  // make the swap
900  RouterV2.swapExactTokensForETHSupportingFeeOnTransferTokens(
901
```

# SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 897

## low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

## Source File

- EMAX.sol

## Locations

```
896  uint256[] memory amount = RouterV2.getAmountsOut(tokenAmount, path);
897  uint256 amountMin = amount[1].sub(amount[1].div(50));
898
899  // make the swap
900  RouterV2.swapExactTokensForETHSupportingFeeOnTransferTokens(
901
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1076

### low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

### Source File

- EMAX.sol

### Locations

```
1075   for (uint256 i; i < addresses.length; ++i) {  
1076       _isExcludedFromFee[addresses[i]] = true;  
1077   }  
1078   emit ExcludeMultiple(addresses, true);  
1079   }  
1080
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1100

### low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

### Source File

- EMAX.sol

### Locations

```
1099   for (uint256 i; i < addresses.length; ++i) {  
1100     require(!_isTrusted[addresses[i]] || _override, "account is already trusted use  
override");  
1101     _isSniper[addresses[i]] = status;  
1102   }  
1103   emit Manage_Snipers(addresses, status);  
1104
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1101

### low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

### Source File

- EMAX.sol

### Locations

```
1100     require(!_isTrusted[addresses[i]] || _override, "account is already trusted use
override");
1101     _isSniper[addresses[i]] = status;
1102 }
1103 emit Manage_Snipers(addresses, status);
1104 }
1105
```

## SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1108

### low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

### Source File

- EMAX.sol

### Locations

```
1107   for (uint256 i; i < addresses.length; ++i) {  
1108       _isTrusted[addresses[i]] = status;  
1109   }  
1110   emit Manage_trusted(addresses, status);  
1111   }  
1112
```

## SWC-120 | POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.

LINE 807

### low SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

### Source File

- EMAX.sol

### Locations

```
806 //antibot - first X blocks
807 if (launchedAt > 0 && (launchedAt + deadBlocks) > block.number) {
808     _isSniper[to] = true;
809 }
810
811
```



## SWC-120 | POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.

LINE 813

### low SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

### Source File

- EMAX.sol

### Locations

```
812     if (  
813         launchedAt > 0 && from != owner() && block.number <= (launchedAt + deadBlocks) &&  
            antiBotmode  
814     ) {  
815         currenttotalFee = 900; //90%  
816     }  
817
```

## SWC-120 | POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.

LINE 1034

### low SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

### Source File

- EMAX.sol

### Locations

```
1033     if (tradingOpen && launchedAt == 0) {  
1034         launchedAt = block.number;  
1035         deadBlocks = _deadBlocks;  
1036     }  
1037     emit OpenTrading(launchedAt, tradingOpen);  
1038
```

# DISCLAIMER

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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.

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## 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.