

**AN EFFICIENT STRATEGY OF ENCRYPTION BASED  
IMPLEMENTATION OF FPGA****Virendra Vijaykumar Banale<sup>1</sup>, G.Deepthi<sup>2</sup>, B.Sunilkumar<sup>3</sup>**

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**ABSTRACT:**

In this paper a technique is proposed based on the well efficient framework oriented strategy in a well effective fashion by which there is an accurate analysis with respect to the overall system in a well oriented fashion respectively. Here the strategy related to the aspect of the data encryption based phenomena in a well effective fashion in which it is related to the aspects of the standard related to the aspect of the advanced encryption based strategy in a well efficient fashion and the implementation of the algorithm takes place in a well effective manner by the help of the implementation based strategy relative to the aspect of the array oriented with respect to the fields programmable gate oriented strategy in a well efficient fashion respectively. Here the implementation of the method is based on the above phenomena in a well effective manner where there is a powerful technique in which it is implemented based on the aspect of the strategy related to the phenomena of the FPGA analysis in a well respective fashion takes place in the system respectively. Here in this new implementation based strategy an effective framework is design din which there is a efficiency related comparative analysis is made in a well effective manner respectively. Here in the present design oriented methodology it includes the strategy of the loop based on the iteration oriented strategy in a well effective manner by which there is an approach related ot the analysis of the encryption based phenomena in which

related to the aspect of the fashion of the orientation of the key encryption of the 128 bits wide in a well effective manner respectively. Where there is an accurate implementation of the S box based strategy in a well efficient manner by the help of the strategy related to the aspect oriented with respect to the table based on the look up strategy in a well effective manner respectively. Here the complexity related to the architecture based strategy is low followed by the well efficient analysis in a well effective manner and also the design oriented specification in a well accurate fashion respectively. Here the present design oriented architecture includes the strategy of the reduced complexity based phenomena followed by the aspect of the strategy related to the well efficient phenomena where there is a increased performance based phenomena respectively. Experiments have been conducted on the present method and a lot of analysis is made on the present method and there is an accurate analysis related to the aspect of the performance based strategy followed by the outcome of the entire system in a well effective fashion respectively.

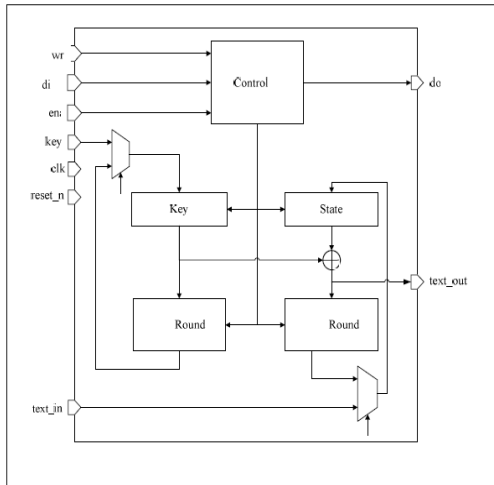
***Keywords: Standard related to the encryption of the advanced strategy, Rijndael model basis, Cipher data, Plain data, Key respectively.***

## **1. INTRODUCTION:**

There is a lot of advancement takes place in the system with respect to the performance based strategy followed by the outcome in a well effective fashion where there is an improved outcome in a well oriented fashion with reduced computation oriented phenomena and there is a rapid advancement in the system based strategy in a well efficient manner respectively [1][2]. As for the sake of the time based strategy an old technique that is prevalent in the market is for the encryption of the data in a well

effective manner takes place in the system on behalf of the implementation oriented strategy in a well efficient manner by the help of the standard related to the aspect of the data encryption based phenomena respectively [3].

## BLOCK DIAGRAM



**Fig 1: Shows the block diagram of the present method respectively**

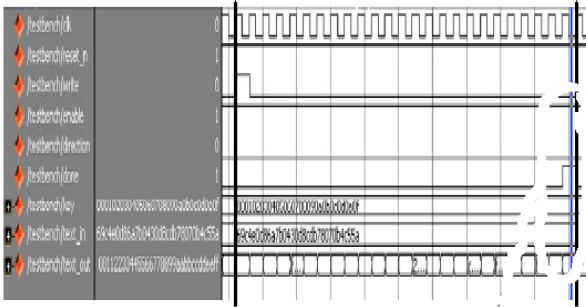
## 2. METHODOLOGY

In this paper a method is designed with a well efficient framework oriented strategy in a well effective manner in which it is related to the aspect of the improvement in the performance based strategy followed by the outcome in a well effective fashion towards the entire system respectively [4]. Here the implementation of the present method is shown in the figure in the form of the architectural view and is explained in an elaborative fashion respectively. Here the present method completely overcomes the drawbacks of the several previous methods in a well oriented fashion respectively. There is a huge challenge for

the present method oriented algorithm based strategy in which there should be an accurate analysis is made on the problems related to the previous methods followed by the control oriented strategy of the degraded performance of the previous methods in a well oriented fashion in terms of the improvement in the performance based strategy followed by the outcome of the entire system in a well respective fashion [5].

## 3. EXPECTED RESULTS

A lot of analysis is made on the present method and a huge number of the computations have been applied on the large number of the data set with respect to the different types of the environment in a well effective fashion respectively. A comparative analysis is made between the present method to that of the several previous methods is shown in the below figure in the form of the graphical representation and is explained in the elaborative fashion.



**Fig 2: Shows the simulations of the present method respectively**

#### 4. CONCLUSION

In this paper a method is designed with a well effective framework oriented strategy in which there is an accurate implementation with respect to the performance based strategy followed by the outcome of the entire system in a well efficient fashion respectively. Here the design oriented strategy includes the aspect of the structure of the results oriented with the comparative analysis in a well efficient manner followed by the present method to that of the several previous existing methods in a well oriented fashion respectively. Here the implementation of the system is based on the strategy of the AES in a well efficient fashion by which by which it is oriented with the data encryption standard in a well effective fashion by which it is related to the 128 bit oriented strategy in a well efficient

fashion followed by the accurate analysis of the implementation relative to the synthesis of the algorithm in a well oriented fashion by the help of the decryption and the encryption related strategy in a well efficient fashion respectively. Here the implementation of the proposed method is shown in the below analysis with respect to the strategy of the architectural oriented representation in a well respective fashion. Here we finally conclude that the present method is effective and efficient in terms of the performance based strategy followed by the outcome in a well efficient fashion respectively.

#### REFERENCES

- [1] FIPS 197, "Advanced Encryption Standard (AES)", November 26, 2001.
- [2] Tessier, R., and Burleson, W., "Reconfigurable computing for digital signal processing: a survey", J.VLSI Signal Process., 2001, 28, (1-2), pp.7-27.
- [3] Ahmad, N.; Hasan, R.; Jubadi, W.M; "Design of AES S-Box using combinational logic optimization", IEEE Symposium on Industrial Electronics & Applications (ISIEA), pp. 696-699, 2010.

[4] Alex Panato, Marcelo Barcelos, Ricardo Reis, “An IP of an Advanced Encryption Standard for Altera Devices”, SBCCI 2002, pp. 197-202, orto Alegre, Brazil, 9 and 14 September 2002.

[5] Mr. Atul M. Borkar, Dr. R. V. Kshirsagar and Mrs. M. V. Vyawahare, “FPGA Implementation of AES Algorithm”, International Conference on Electronics Computer Technology (ICECT), pp. 401-405, 2011 3rd.