AMD RYZEN

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Abstract— In the last few years, technology, especially microprocessors, have had huge advancements and they are expected to have even more in future therefore with this rapidly growing phase of technology, is it still possible to use microprocessors that were considered to be the most advance, at the time, not to long ago? The project aims to analyse the working and applications of the AMD RYZEN microprocessor that was released in 2017. And this analysis in turn will help us to study the latest released microprocessor.

I. INTRODUCTION

[1]Ryzen is an AMD CPU aimed at the server, desktop, workstation, media centre PC and all-in-one markets. AMD's Ryzen base models feature eight cores and 16-thread processing at 3.4Ghz with 20MB cache, neural net-based prediction hardware and smart prefetch. Codenamed Zen development, Ryzen is the first major architectural change for AMD sice Bulldozer.

[2]Ryzen processor won fast acclaim from technology Analysts and reviewers who said AMD could now compete with Intel in terms of processors performance,not just price.[5]

AMD StoreMI Technology, software that combines speed of your SSD with the capacity of your hard disk into a single, fast, [4] easy to manage drive-included with AMD X570, 400 Series, or X399 motherboard.

[3]Features of AMD Ryzen processors:-
- *Two threads per cre*
- *8MB shared L3 cache.*
- *Large,unfied L2 cache*
- *Micro-op cache*
- *Two AES units for security*
- *High efficiency FinFet transistors*

II. RELATED WORK

One of the [4][5]major takeaways from Microsoft's launch this week was that the company was spreading its wings with devices made by all three major SoC vendors: Intel, AMD, and Qualcomn. Both the AMD and Qualcomm design wins afre especially important given that these companies did not traditionally have foothold in this space.

To make the overview [4]on the announcement made by Microsoft at Microsoft's event: the Surface Laptop 3 from AMD will be of 15 inch design of laptop which will be focused at the consumers market. The features include a quad core Zen+ 12nm APU with up to 11 compute units of vega Graphics within a standard 15W TDP design.

AMD's final repair for the controversial [3][5] issue of lower than expected boost speeds on its Ryzen 3000 processors has been tested. Although it cannot solve all problems with boost clock.

[6]Let us study this in more detail: Tom's performed its testing Using Ryzen 9 3900X processor in GB X570 Aorus Master motherboard, as GB is one of only two motherboard vendors which has released the final version of 1.0.0.3ABBA firmware that corrects the boost problem.

III. RESULTS AND DISCUSSION

As a value proposed AMD and Ryzen processors is easy to love. Intel was making 4-core/8-thread as its top 'mainstream consumer' solution for seven years when AMD was not its competitive.

Then AMD releases its Ryzen and delivers 8-core/16 thread solutions to the masses , and suddenly Intel starts 6-core and 8-core mainstream processors.

IV. DIAGRAM

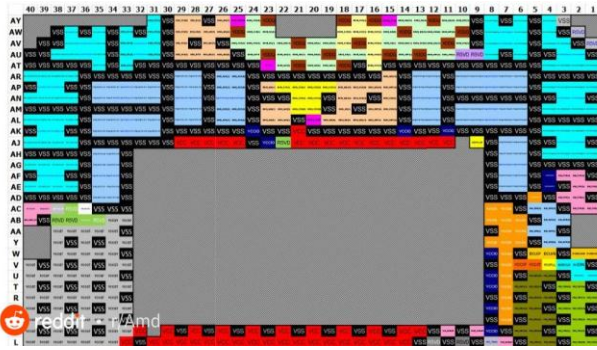Fig. 1 Diagram of AMD RYZEN

Fig. 2 AMD RYZEN Pin diagram

V. CONCLUSION AND FUTURE SCOPE

From this study, we have concluded that the AMD RYZEN is one of the most reliable microprocessors, which are awesome for advanced PC gaming and reach the requirements for high level PC performances. Giving tough competition to Intel processors.

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