

# Wireless USB flash drive

Amirthaganesh.S

Student, Electronics and Communication Engineering, Sri Manakula Vinyagar Engineering College, Puducherry

**Abstract-** The aim of this paper is to design a Wireless USB flash drive in which the USB flash drive can be used without connecting using the dongle. This makes the data transfer using USB more sophisticated. It also provides speed upto 1 Mbps

**Index Terms-** Wireless, dongle, sophisticated, 1 Mbps

## I. INTRODUCTION

USB flash drive is one of the commonly used memory storage device by all the people. The main reason for this is because of its compatibility and user friendly memory storage device. It can able to store data of any kind. The data stored in the USB flash drive can be erased, edited, formatted. The amount of data that can be stored depends upon the size allocated for the USB flash drive. Memory spaces commonly used are 2GB, 4GB, 8GB, 16GB and 32GB. The cost of the USB device varies depending upon the memory space of the flash drive. The USB flash drive can be operated by connecting it to a dongle in the PC or laptop.

Now my paper is about synchronizing the data available in the USB flash drive with the PC or laptop. This can be achieved by implementing the effect of few modules available and also by modifying the design of the USB flash drive. We shall now discuss in detail

## II. MODIFICATIONS TO BE DONE IN THE USB FLASH DRIVE

A bluetooth module is to be attached to the USB flash drive. By implementing various technologies, the addition of the Bluetooth module is made sure that it doesn't affect the size of the USB flash drive. One of the suggested Bluetooth modules that can be used is **Bluetooth V2.0 RS232**. The module is shown in figure.1



Figure1: Bluetooth V2.0 RS232

The reason for preferring this module is because the dimensions of the module is (2.7cm\*1.3cm\*0.1cm). As we

discussed above, by implementing the Bluetooth module in the flash drive, the size of the flash drive must not be affected. Hence this module is preferred.

## III. MODIFICATIONS TO BE DONE IN PC

Now we have made modifications in the design of USB flash drive. The next one is to add a component to the PC such that we can able to synchronize the flash drive with the PC. That is a RF wave of 2.4 GHz is to be produced to synchronize the PC with the USB flash drive and transfer the data. The module which meets the requirements is IEEE 802.15.4-Compliant Atmel transceiver. This module is able to produce a RF wave of frequency 2.4 GHz. The module IEEE 802.15.4-Compliant Atmel is shown in figure 2.

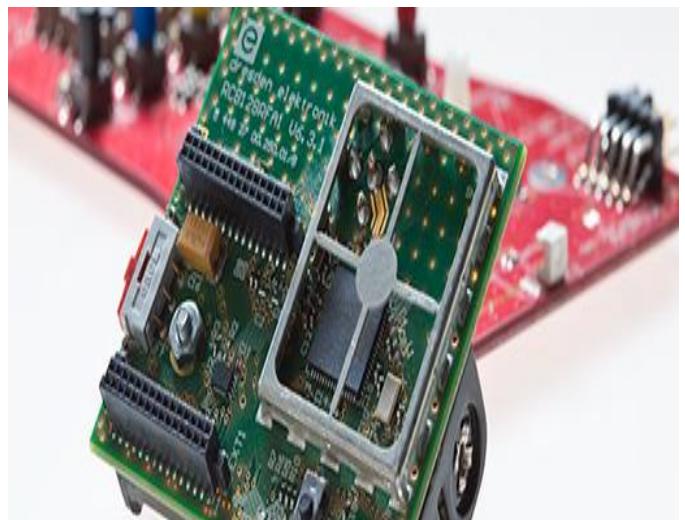


Figure2: IEEE 802.15.4-Compliant Atmel transceiver

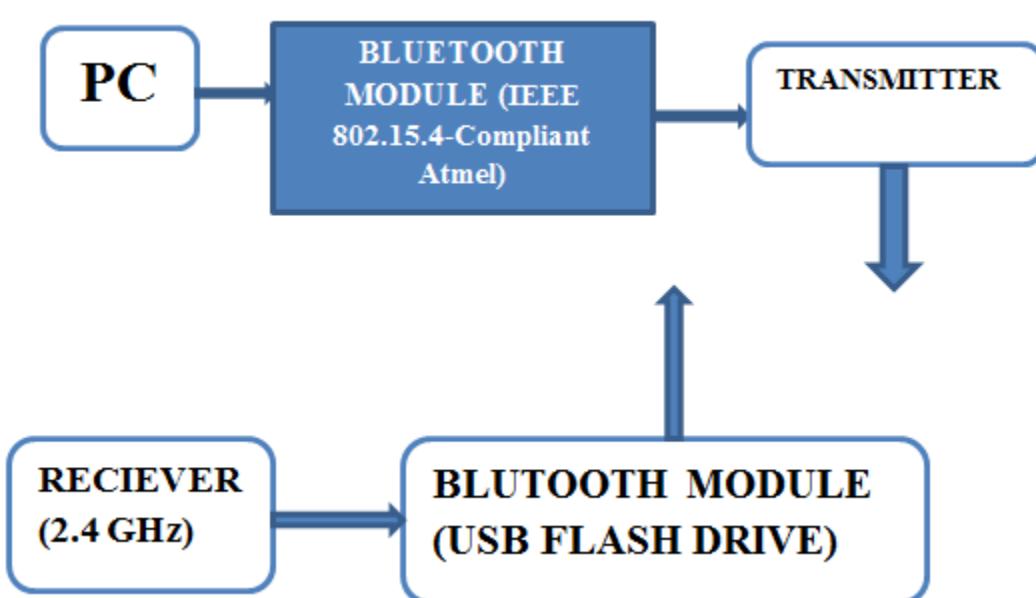
## IV. TO MAKE THE OPERATION MORE SECURE

During synchronization of data, only the authorized PC user should access the USB flash drive. Hence, a solution has been found for this problem. We can use a secure USB flash drive i.e. a USB flash drive with secure code can be used. It has a keypad with a numbers from 0 to 9. Unless the correct combination of the code is pressed, the USB flash drive is inaccessible. Thus unauthorized members cannot access the USB flash drive. The USB flash drive with security keypad is shown in figure 3.



Figure 3: Secure USB flash drive

gets synchronized with the PC and now it is ready to perform any type of operation such as copying the files, deleting the files, editing the files in the memory of the flash drive. The transfer of data is estimated to about 1 Mbps. It may vary according to the file size. The operation can also be explained by the following block diagram



## VI. CONCLUSION

This paper aims on “Why not?” Wireless USB flashes drive when there is a wireless mouse and keyboard. This is more compatible. The user can access the USB flash drive by placing it at some distance from the PC. As technology improves, we can find a solution to increase the speed of the data transfer. Since there exists some hurdles during wireless communication.

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## REFERENCES

- [1] “How to design and develop impressive wireless products” ([http://electronicsforu.com/electronicsforu/circuitarchives/view\\_article.asp?sno=1464&title%20=%20How+to+design+and+develop+impressive+wireless+products&id=12374&article\\_type=6&b\\_type=new](http://electronicsforu.com/electronicsforu/circuitarchives/view_article.asp?sno=1464&title%20=%20How+to+design+and+develop+impressive+wireless+products&id=12374&article_type=6&b_type=new))
- [2] “Wireless Bluetooth module” (<http://dx.com/en/p/wireless-bluetooth-rs232-ttl-transceiver-module-80711#.Uwt8puOSwqw>)

## AUTHORS

**First Author** – S.Amirthaganesh, Student, Electronics and Communication Engineering Department,  
[amiraravind@gmail.com](mailto:amiraravind@gmail.com)