IMPLEMENTATION OF USB BASED DATA TRANSFER USING EMBEDDED CONTROLLER

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Abstract: This paper presents a data transfer between pen drive to pen drive and then pen drive to mobile without using the computer. The data transfer is done by using computer it consumes more power and also it’s not simple carry device to particular location. The data transfer is done by using an ARM-7 processor without interfacing to personal computer. Aim of this project is inserted into the USB port then the signal will be sent through ARM7 processor to another pen drive. Then the signal processor identify the host pen drive is detected, now the ARM processor will start the fetching the data from source pen drive into buffer and the ARM processor waits for to reach the destination pen drive. When the ARM processing gets the signal data from source pen drive, then only the ARM processor is ready to transfer the data. Before transferring the data the ARM processor should get input from an external touch panel from user. When the users press the touch panel, ARM processor gets the information transfer between two pen drives.

1. INTRODUCTION

Now a day’s carrying a personal computer or a laptop just for the sake of data transfer is not comfortable these days in the age peoples want all devices to be simply handy. More over transferring data through a computer it involves a lot of power to be wasted, and also it has completely functional before it can transfer data. At that time the threat of viruses and malware has made the life of computer more complicated. This virus gets activated as soon as the device is plugged into the system to get copied data along with from other data one ash device into anther device. This paper can provide a valuable solution to what are the problem faces by a user in above situations. The main aim of this paper is to build a small and handy device for carry and transfer data from one USB flash device to another. These USB storage devices are being peripheral devices; it is a host usually a computer to initiate and communication between two storage devices or peripheral devices. The data transferring is through ARM7 module LPC2148. That two pen drives are connected to USB module. For that File Transfer communication between two pen drives is done by using ARM7 module. To transfer data between two pen drives with data is connected to USB support. In this project a user has to enter the password it has two options in it one is view and other is send. When a user pressing view option user can view data present in pen drive and by using send option user can send data from one pen drive to other pen drive.

II. RELATED WORK

Recently the data transfer between two systems can be done with either a internet accesses or LAN network or by using USB storage device. Nowadays user can prefer external device like pen drive which stores information and helps us to transfer files or folders from one computer to another and they are also called USB flash drive. The flash drive is used for data storage that includes flash memory with integrated USB interface. These USB flash devices are typically removable and rewritable and physically much smaller then optical disk. The data transfer from one pen drive to another pen drive, between a medium or master device is required since pen drives are USB slave devices. Because of USB slave devices are cannot communicate directly with USB devices. The other medium is a wireless device controller like Bluetooth or Wi-Fi to create a link between two active devices for sending and receiving data from one device to another. The limitation of the device is that it can be used for pen drive up to the maximum limit is 2GB storage capacity data. The proposed method for transferring data between two pen drives. Aim of this paper is sharing data between two modules directly without using computer or laptop. Here we interface my controller ARM 7, USB controller device VNCIL to interface two pen drives up to 2 GB only. This ARM controller reads the data from one pen drive to using SPI protocol. The ARM controller reads the data of this pen drive and as well as to display the contents on 20x4 GLCD. In that display have menu screen the user can select/copy/cut/paste from one master pen drive to the slave pen drive using matrix key board.

III. IMPLEMENTATION DETAILS

3.1 System Block Diagram
3.3 The Main Features of This Project

a) It includes touch screen in place of graphical screen and keypad for selecting the data which makes human work easier by drag and drop.
b) Information can be transferred from first pen drive to second or else second pen drive to first.
c) Files transferring speed is much faster up to 12Mb/s.
d) Power consumption is also less
e) It can not only transfer the data but also format, delete and copy the data from one pen drive to other vice versa.

IV. RESULT AND DISCUSSIONS

This project research on friendly ARM for data transfer between two USB devices without computer has been successfully designed. And it has been developed by integrating all features of the hardware components and software’s are used. By using highly advanced ARM7-LPC2148 board and with the help of growing technology the project has been successfully implemented. Size of the developed board is became the reason behind the bulkiness.

V. CONCLUSION AND FUTURE SCOPE

This paper gives new technology to transfer data between two USB data drives without the help of pc. And also it has been developed to integrating features of all the hardware components and require software used. The advantage of the proposed device is that it is operated by battery why because it needs less power to transfer the data. Currently the proposed system for transfer the data up to 2GB only. In future we can implement the project for reading, editing any data by installing the software’s which supports for opening the document like MS word, notepad. And it can also be implement to provide the security for data transfer with the help of Ethernet.

REFERENCES

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