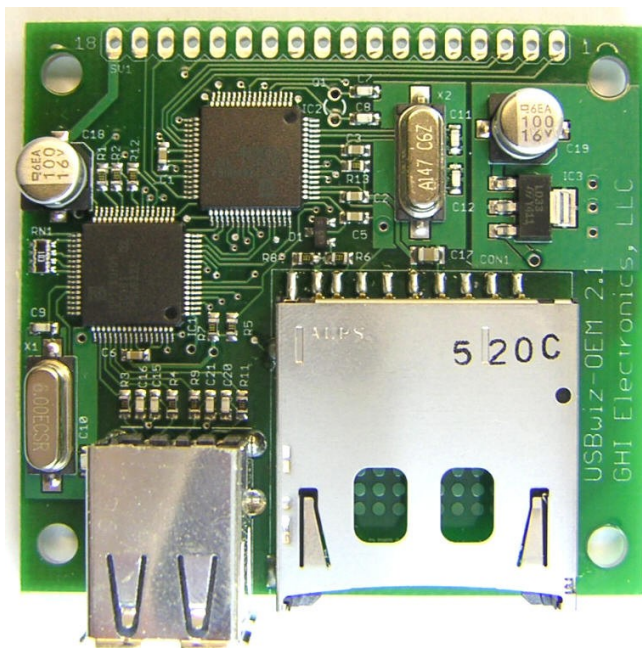
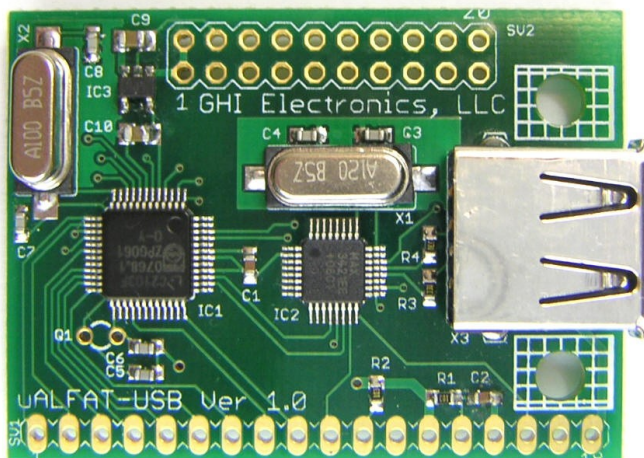


USBwiz vs μALFAT



USBwiz-OEM our OEM board for USBwiz chipset



μALFAT-USB OEM board

1. Introduction

USBwiz and μALFAT chipsets can save files to USB memory and SD cards. Also, both can access many USB devices, including printers, mice, joysticks, keyboards, cell phones...etc. So, how do you select the right chip for your product?

2. Boot loader

USBwiz and μALFAT have state of the art boot loader that loads new firmwares from SD, MMC, or USB memory. The only difference between the two is that μALFAT boot loader can run UART interface only. It is still possible to update the firmware on μALFAT using SPI through sending the 'X' command but you can go in boot loader mode and process commands. This is not a drawback at all because it is not needed in most systems.

3. FAT Access

USBwiz supports FAT12, FAT16 and FAT32, whereas, μALFAT supports FAT16 and FAT32 only. FAT12 is only needed for devices smaller than 32MB and is rarely used. Also, USBwiz contains 3 independent FAT cores. This allows USBwiz to access files on 3 different drives simultaneously. μALFAT supports multiple file access but on one drive only. Let us assume you have a file on SD and you need to copy it to USB memory. With USBwiz, this can be done very easily, very fast and with no buffers needed on your system. In contrast, μALFAT will need to mount the SD card, open the file, and then you have to read the file into a buffer that exists on your system. Once you have the data, close the file and then mount the USB memory to write the data that

you have in your buffer on the new file.

4. FAT commands

μALFAT commands set is very rich and fits most needs. Commands are available to manipulate files and to access folder. USBwiz adds many other commands on top of what μALFAT has. For example, the ReadWrite command is very useful for copying and modifying files. Many other commands are included such as rename, shadow, split, resize and more.

5. Long File Name

μALFAT supports LFN (Long File Name) which allows file names to be longer than 8 characters. This is a patented technology by Microsoft corporation. μALFAT is licensed by Microsoft for commercial use. USBwiz doesn't support LFN.

6. USB Driver and Ports

Both μALFAT and USBwiz have a very robust USB cores that can do all the needed work. The USB host chip used with μALFAT is MAX3421E. This chip is very small and requires very few connections compared to ISP1160 used with USBwiz. On the other hand, USBwiz supports 2 USB devices.

7. SD and MMC Support

μALFAT can access SD and MMC cards about 30% faster than USBwiz.

8. Firmware Capabilities

USBwiz firmware can do it all, USB memory, joysticks, mice, keyboard, printer...etc. On the other hand, μALFAT standard firmware only includes drivers for using Mass Storage media devices and the FAT file system.

9. Voltage requirement

USBwiz requires 3.3V only but μALFAT requires 3.3V and 1.8V

10. PCB Layout

μALFAT layout is much easier than USBwiz. Both chipsets can be laid out on a double sided PCB. All our OEM boards are only double sided even USBwiz-DEV

11. Code libraries

Example code libraries and examples are provided for both USBwiz and μALFAT.

12. Development System

USBwiz-OEM, μALFAT-SD and μALFAT-USB have a very similar pin-out. All these OEM boards can plug right into uPICFAT base board to complete the development system.

13. Price

μALFAT price is lower than USBwiz



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