USBwiz-OEM
A complete USB and FAT systems that run with very simple commands over UART, SPI, or I2C.

1. Introduction

Thanks to USBwiz™ chipset, now you can access FAT files on SD card and 2 USB drives simultaneously. USBwiz has 3 independent FAT cores and a very rich file manipulation commands. That is not all, USBwiz supports many USB device such as keyboards, mice, joysticks, printers, cellphones, FTDI, prolific, printers and many more! Any product can access all these devices through simple commands running over UART, SPI, or I2C. USBwiz-OEM board contains USBwiz chipset and the other needed circuitry. For more details on USBwiz or USBwiz-OEM, consult USBwiz Manual.

2. USBwiz-OEM board Key Features

- Fully assembled and tested
- Standard 0.1" placement for header
- Pin-out compatible with uPICFAT development system
- 2 USB and SD connectors
- Intergraded 3.3V regulator
- Ready for 32Khz crystal

3. Supported Devices

- USB hard drives
- USB thumb drives
- SD memory card
- MMC memory card
- USB joyatics
- USB mice'
- USB keyboards
- USB cell phones
- printers
- FTDI
- prolific
- and many more!

Consult USBwiz manual for more details.

4. Pin-out

PIN #	uALFAT-USB
1	UART_TX/DTRDY
2	UART_RS/BUSY
3	I2C_SCL
4	I2C_SDA
5	SPI_SCK
6	SPI_MISO/UART_RTS
7	SPI_MOSI/CTS
8	SPI_SSEL#

PIN #	uALFAT-USB
9	MISC
10	N/C
11	D6/BL#(for manufacturing use only)
12	VBAT
13	VCC (3.3V)
14	RESET#
15	GND
16	MODE0
17	MODE1
18	5V

5. Quick Start

The fastest way to get the OEM board started is through connecting the UART to a PC COM port through an RS232 level converter. USBwiz commands are very simple for user to send them using a terminal program and the same commands are structured to be easily parsed by a simple microcontroller. IF entering command manually, handshaking is not required as USBwiz can process the commands much faster that the user can enter them; therefore, CTS and RTS pins can be left from the RS232 level converter. It is very important to connect CTS to ground if it not going to be used by the user. So, the only needed pins to be connected are UART_TX, UART_RX, 5V and GND. The VCC(3.3V) is an output from USBwiz that can be used to power an external circuitry. Double check the schematic before connecting anything to this pin. Once the OEM board is wired, a terminal must be set to 9600 baud with no parity and one stop bit the the board can be powered. If all connections are correct, a "GHI Electronics, LLC...." banner will show on the terminal.

6. GHI Supplies Everything!

We understand that our customer need a quick solution with little or no development time. For that, we provide a complete 'C' source code library for free to use USBwiz. The library should compile on any compiler for any processor. The library communicates with USBwiz through a simple driver. We provide examples to use UART, SPI or I2C using PICmicro from Microchip but the driver can be ported to any processor.

7. In-filed Upgradeable Firmware

USBwiz firmware is stored in the internal FLASH memory and can be easily updated. USBwiz can load the new firmware directly from the connected USB memory or SD memory card. This allows your system to be up to date with any new features or bug fixes.

8.Special Firmwares

USBwiz can also load special and custom firmwares. We offer the service of writing special firmwares to fit our customer's needs.