USER MANUAL

FliteDeck Master 3.0

VIA System Management Software

1.00-05032011-174600

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Revision History

Version	Date	Remarks
1.00	5/3/2011	Initial release

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1. Installing FliteDeck Master 3.0

This section introduces the platform requirements and describes how to install and uninstall the VIA FliteDeck Master application.

1.1. System Requirements

1.1.1. Software

☐ Microsoft Windows XP

☐ Microsoft .NET Framework 2.0 or above

1.1.2. Hardware

The VIA FliteDeck Master application is compatible with many VIA VEPD boards. There is a specific version for each compatible mainboard model. Be sure that the correct version is available before attempting to install the application.

1.2. Installing the Application

The FliteDeck Master application is packaged in a ZIP file named **FliteDeck_3.x.x.x_model_name_yyyymmdd.zip**. The "**x**" represents the version number. The "**yyyymmdd**" represents the year, month and date. The "**model name**" represents the model of the board (e.g., EPIA-M850).

1.3. Running the Application

Extract the files from the ZIP archive. Once the files have been extracted, click on the file named **FD_Util.exe** to launch the application. The application icon is shown in Figure 1.

Figure 1

1.4. Uninstalling the Application

To uninstall FliteDeck Master 3.0, simply delete the folder that contains the application files.

2. FliteDeck Master 3.0 Overview

The FliteDeck Master application enables software control over the mainboard. This application can be used as a reference for developers who are interested in implementing FliteDeck controls into their own software. Developers can obtain the FliteDeck SDK by contacting VIA Embedded.

2.1. Main FliteDeck Features

FliteDeck Master provides the following main features:

2.1.1. GPIO Control

FliteDeck Master enables access to any GPIO pin in order to read from or write to the pin. GPIO pins can be set to function as either input or output pins. If the pin is set to input, high or low values can be read from the pin. If the pin is set to output, high or low values can be written to the pin.

2.1.2. SMBus Control

FliteDeck Master provides a way to assign a slave address and set the offset. Data can then be read from or written to the slave address.

2.1.3. LCD Brightness Control

FliteDeck Master enables the user to control the brightness of LCD displays.

2.1.4. Watchdog Timer

FliteDeck Master enables control over the Watchdog Timer. It provides the ability to set the values for the timeout and restart timers.

2.1.5. Voltage Monitor

FliteDeck Master enables voltage monitoring across the mainboard and CPU including +12V, -12V, VSB, +5V, +3.3V, VBAT, Vcore.

2.1.6. Fan/Temperature Monitor

FliteDeck Master enables the monitoring of CPU fan speed, system fan speed, CPU temperature, and system temperature.

2.1.7. CPU/Memory Information

FliteDeck Master can display can display information about the CPU and memory including CPU name, package, speed, physical memory size, virtual memory size, etc.

2.1.8. HDD Information

FliteDeck Master can display information about the HDD size, available size, file system.

2.1.9. Drive S.M.A.R.T. Information

S.M.A.R.T. is an acronym for Self-Monitoring, Analysis and Reporting Technology. This is a standard for checking whether a hard disk is good or damaged.

2.1.10. Flash Port

FliteDeck Master has an integrated BIOS flashing utility for updating the BIOS when running Windows. The Flash Port function can also make a backup of the exiting BIOS so the user can revert to the previous version if necessary.

3. Using FliteDeck Master 3.0

3.1. User Interface

The graphical user interface (GUI) makes use of a tabbed design metaphor. Clicking on a tab will display the contents of its corresponding page. If a product does not support the features within the tabbed page, none of the items on the page will be selectable.

The GUI has two portions: the menu and the tabbed pages. Referring to Figure 2, the menu area is located on the left side (outlined in red) while the tabbed pages are on the right side (outlined in green).

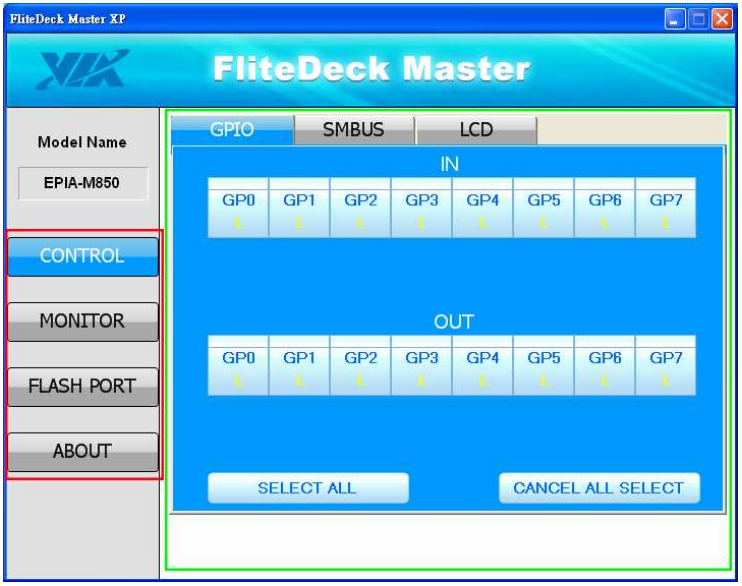

Figure 2

At the top of the menu area, the model name of the product is shown. In the example above, the model name is EPIA-M850.

There are four menu categories that can be selected: **Control**, **Monitor**, **Flash Port** and **About**. The menu categories can be selected by clicking on their respective buttons.

3.2. Control

The **Control** menu category contains three functions: GPIO, SMBus, and LCD.

3.2.1. GPIO

The GPIO tabbed page is the default page of the FliteDeck Master application. It is the first page that shows when FliteDeck Master launches.

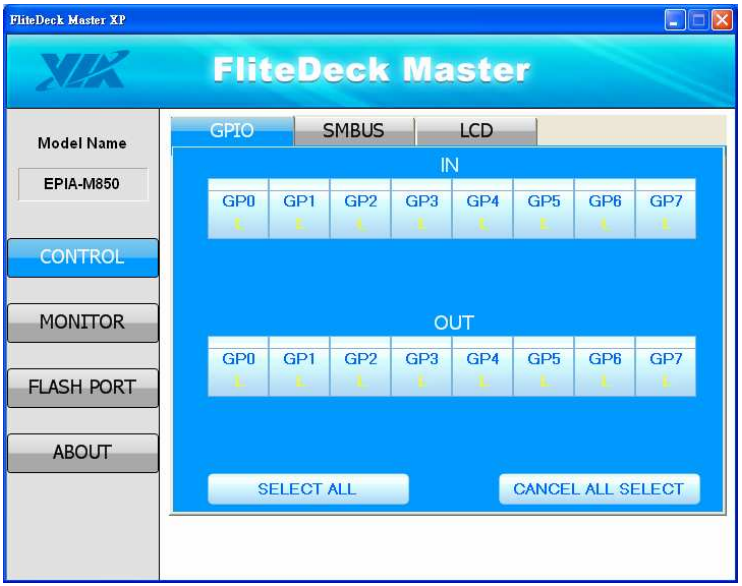

Figure 3

The GPIO page provides an easy and intuitive graphical interface for controlling the GPIO pins on the mainboard. Users can easily select one or more GP Input pins to read high or low potential. Users can also easily select one or more GP Output pins to send high or low potential.

When the bar above the GP name is green, that means the particular GP pin which it corresponds to is being controlled through the FliteDeck Master application. To access a GP pin, simply click on the bar to enable it. The GPIO settings will be automatically updated every 0.5 seconds.

Figure 4 shows that GP Input 0 is selected with its potential set to low. And GP Input 1 is selected with its potential set to high.

Figure 4

To toggle the potential from low to high or vice versa, move the mouse cursor directly over the H or L of the desired GP pin and click to toggle the setting.

There are two ways to select all of the GPIO pins. One way is to manually select each bar over the GPIO pins. The second way is to click on the SELECT ALL button, which is outlined in red in Figure 5 below.

Figure 5

Similarly, there are two ways to deselect all of the GPIO pins. One way is to manually deselect each bar over the GPIO pins. The second way is to click on the CANCEL ALL SELECT button, which is outlined in green in Figure 5 above.

3.2.2. SMBus

The SMBus tab is the second tabbed page in the **Control** menu category as shown in Figure 6.

Figure 6

The SMBus page provides access to read data from or write data to a connected SMBus device. In order to use this feature, the slave address and offset of the target device must be entered into the corresponding fields on the SMBus page.

To toggle between reading and writing modes, click on the large blue button immediately below the words **Read/Write**. The large blue button will show either an **R** for reading data from the slave address or a **W** for writing data to the slave address. See Figure 7 and Figure 8 for examples of reading and writing respectively.

Figure 7

Figure 8

3.2.3. LCD

The LCD page is the third tabbed page in the **Control** menu category as shown in Figure 9 below.

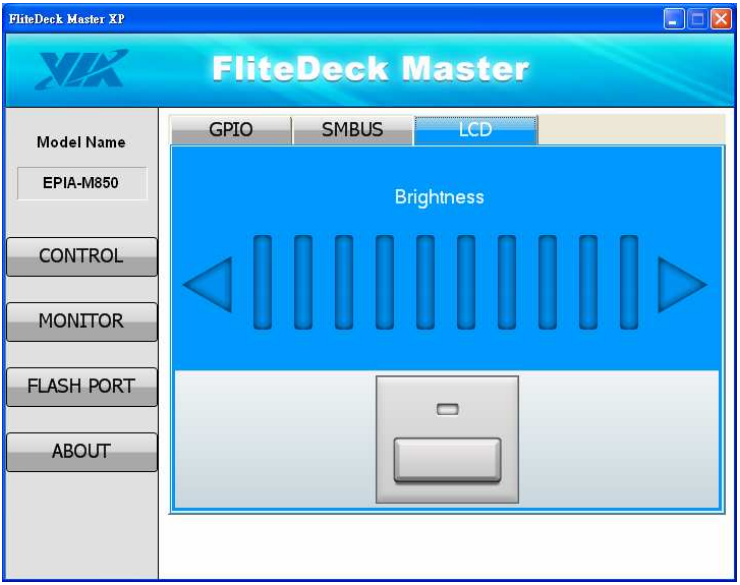

Figure 9

The LCD page provides access for controlling the brightness of the LCD and to turn the LCD backlight brightness control on or off.

To adjust the brightness levels of the LCD, click on the left or right arrow. There are 10 levels of brightness as indicated by the brightness meter. The green bars indicate the current level of brightness.

The button at the bottom portion of the LCD page toggles the LCD backlight brightness control on and off. Figure 10 shows the LCD backlight brightness control is off. Figure 11 shows the LCD backlight brightness control is on.

Figure 10

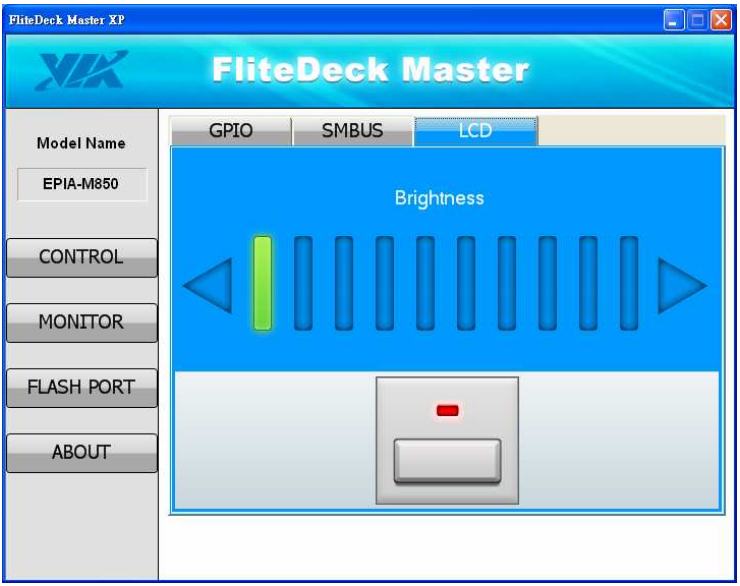

Figure 11

3.3. Monitor

The **Monitor** menu category has six functions: Watchdog Timer, Voltage, Fan/Temperature, CPU/Memory Info, HDD Info, and Drive S.M.A.R.T.

3.3.1. Watchdog Timer

The Watchdog Timer page will be immediately visible in the tabbed page area after selecting the **Monitor** menu category.

Figure 12

The Watchdog Timer page provides access for controlling the onboard Watchdog Timer.

The Watchdog Timer page contains three indicators for showing the progress of the Watchdog Timer. The first indicator is a set of "lamps" (green, yellow, and red from right to left) at the very top of the page. When not lighted, the lamps appear gray in color. At any time, only one color will be lighted.

The three lamps indicate the approximate amount of time left in the timer. The green lamp indicates that 0 to 1/3 of the seconds entered in the **Timeout** field have elapsed. The yellow lamp indicates that 1/3 to 2/3 of the seconds entered in the **Timeout** field have elapsed. The red lamp indicates that 2/3 to all of the seconds entered in the **Timeout** field have elapsed.

The second indicator (immediately below the first indicator) shows the actual number of seconds in numerical form. These seconds will countdown according to the Watchdog Timer.

The third indicator (immediately below the second indicator) shows a rainbow gradient colored progress bar. The progress bar will contract as the timer counts down.

Figure 13, Figure 14, and Figure 15 show an example of the Watchdog Timer counting down.

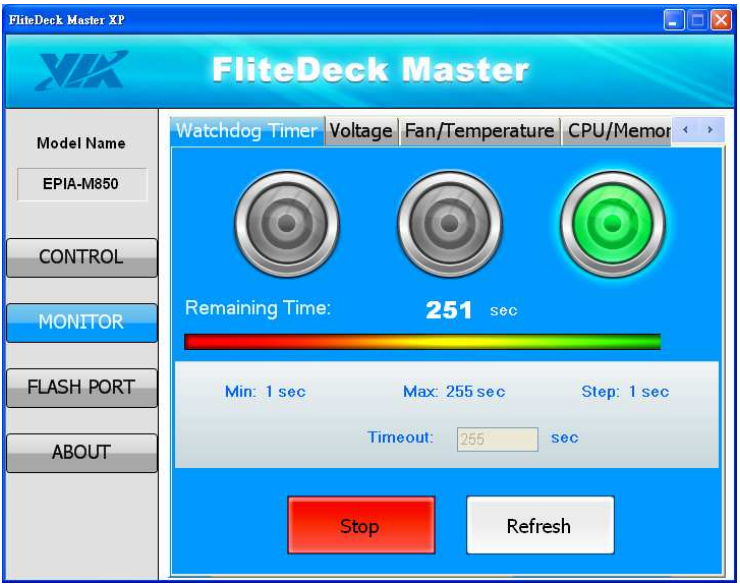

Figure 13

Figure 14

Figure 15

3.3.1.1. Starting the Timer

To activate the Watchdog Timer, a timeout value must be entered in the **Timeout** field. The timeout value can only be an integer from 1 to 255. Once the timeout value has been set, simply click on the **Start** button to activate the Watchdog Timer.

3.3.1.2. Refreshing the Timer

In a real application, the Watchdog Timer should refresh automatically. But for the purposes of debugging, FliteDeck Master includes a **Refresh** button to force a simulation of refreshing the timer. The **Refresh** button is only available when the timer is counting. To simulate refreshing the timer, click on the **Refresh** button.

3.3.1.3. Stopping the Timer

To stop the timer, simply click on the **Stop** button.

3.3.1.4. Resetting the Timer

The timeout value can be reset as long as the timer is not running. While the timer is running the **Timeout** field is not selectable. First, stop the timer, then input the new value in the **Timeout** field. Then, click on the **Start** button to reset the timer.

3.3.2. Voltage

The Voltage page is the second tabbed page in the **Monitor** menu category as shown in Figure 16 below. This page provides certain voltage values from the board/system. If an item is not supported by that board/system, the characters "N/A" will be displayed in the value field. The following table shows a description of possible voltages.

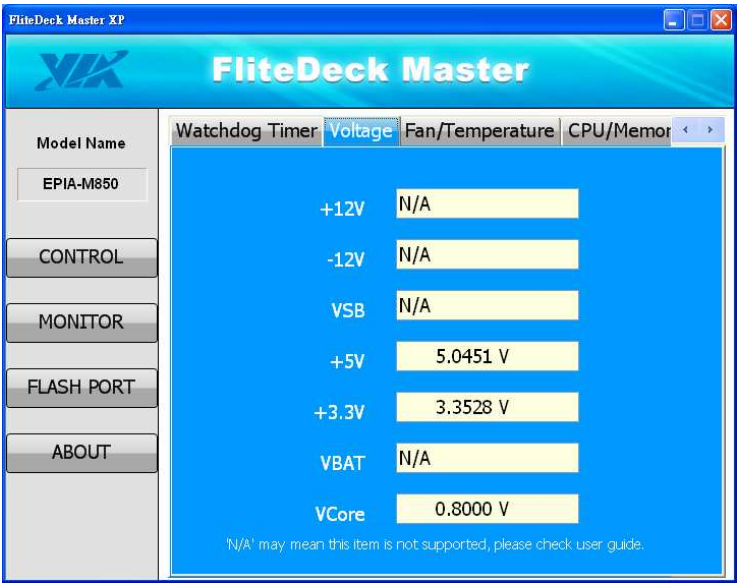

Figure 16

3.3.3. Fan/Temperature

The Fan/Temperature page is the third tabbed page in the **Monitor** menu category as shown in Figure 17 below. This page provides the values of the CPU fan speed, system fan speed, CPU temperature and system temperature. If an item is not supported by that board/system, the text string "N/A" will be displayed in the value field. If the system fan speed and system temperature are supported but the value still shows "Please check H/W.", that means the mainboard model cannot load the system fan or thermal sensor.

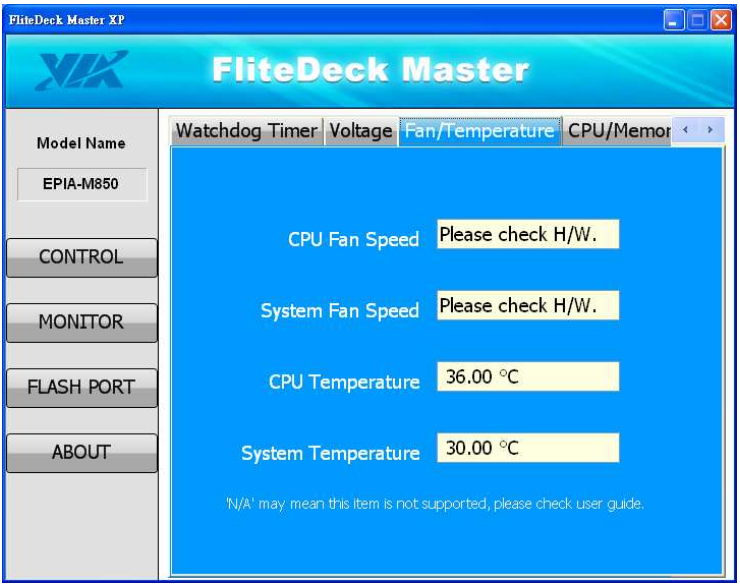

Figure 17

3.3.4. CPU/Memory Info

The CPU/Memory Info page is the fourth tabbed page in the **Monitor** menu category as shown in Figure 18 below. This page provides information about the CPU name, package type, physical memory, virtual memory, etc.

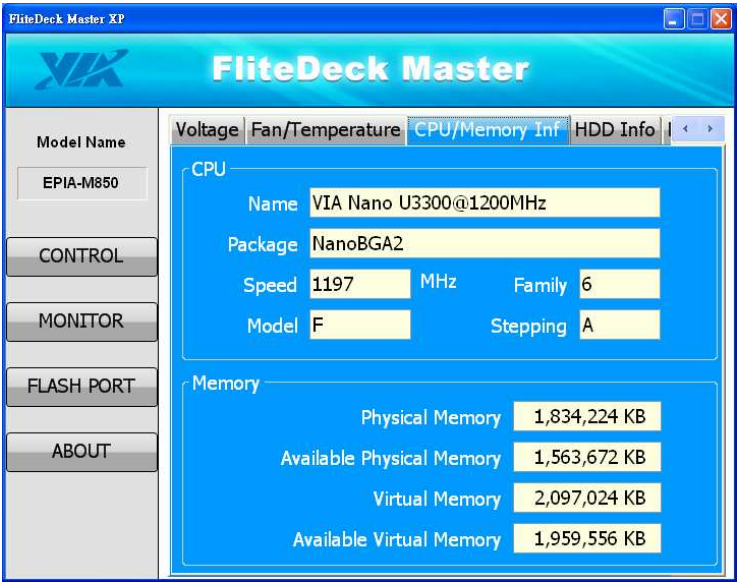

Figure 18

3.3.5. HDD Info

The HDD Info page is the fifth tabbed page in the **Monitor** menu category as shown in Figure 19 below. This page provides information about the hard disk on the board/system including disk label, size, file system, etc.

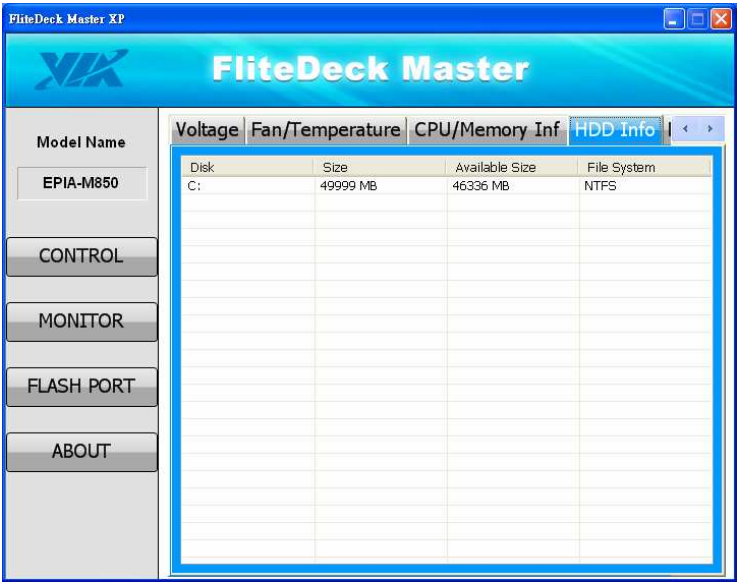

Figure 19

3.3.6. Drive S.M.A.R.T.

The Drive S.M.A.R.T. page is the sixth tabbed page in the **Monitor** menu category as shown in Figure 20 below. This page provides information about the hard disk S.M.A.R.T. values.

Figure 20

3.4. Flash Port

The **Flash Port** menu category enables the user to modify or backup the BIOS firmware.

3.4.1. Backing up the BIOS firmware

Before flashing the BIOS, it is ideal to make a backup of the existing BIOS firmware. Sometimes, new BIOS ROM files can cause unforeseen problems. Without a backup, it will not be possible to revert to the previous BIOS firmware.

To create a backup of the existing BIOS firmware, click on the Backup BIOS button (outlined in Figure 21).

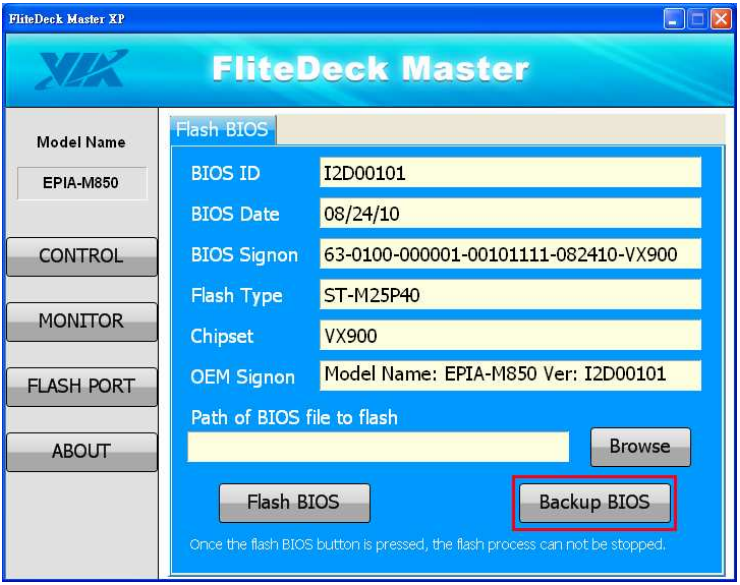

Figure 21

After clicking on the button, a file browser window will be displayed as shown in Figure 22.

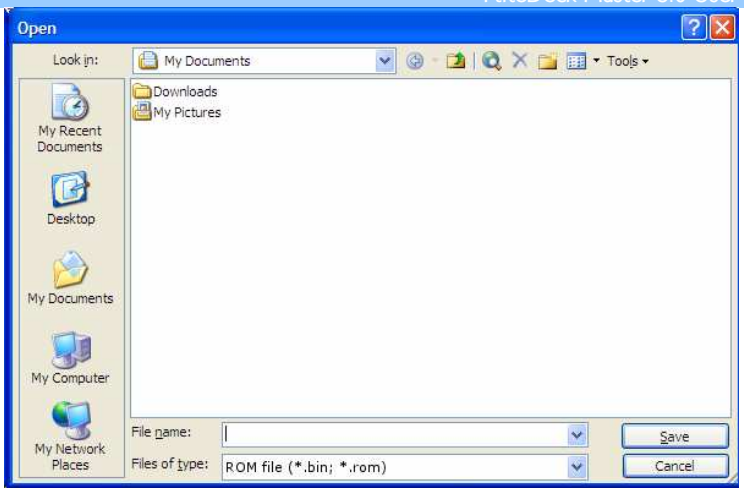

Figure 22

Navigate the file browser to the location where the existing BIOS firmware will be saved. Then click the **Save** button. A notification will be displayed to inform whether a backup file was successfully created or not.

3.4.2. Modifying the BIOS firmware

To replace the BIOS firmware with a newer or older version, click on the **Browse** button (outlined in Figure 23).

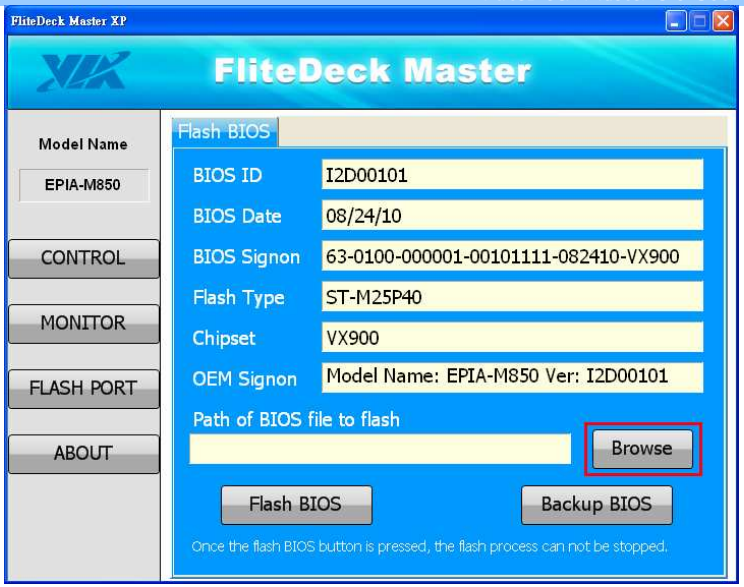

Figure 23

After clicking on the button, a file browser window will be displayed as shown in Figure 24.

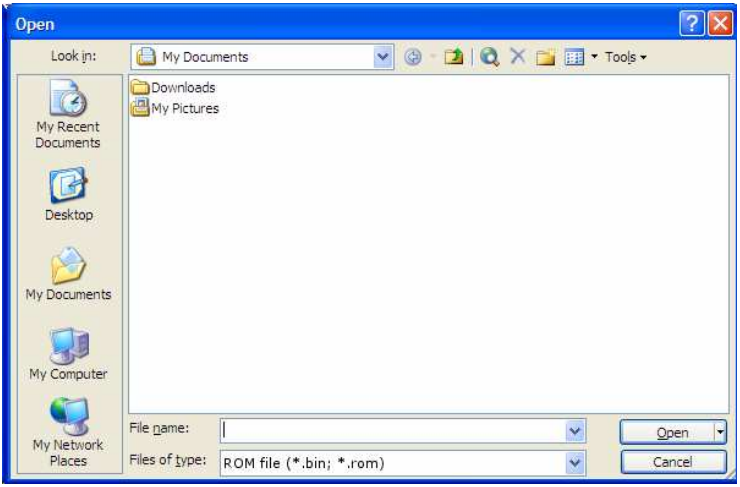

Figure 24

Navigate the file browser to the location where the new (or old) BIOS ROM file is saved. Then click the **Open** button. The path to the file will populate the field outlined in Figure 25.

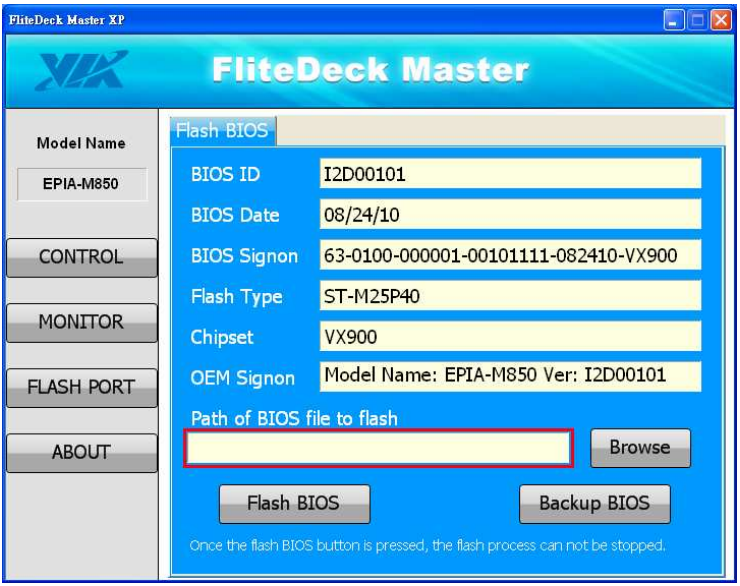

Figure 25

Once the correct path has been entered, click on the **Flash BIOS** button to commence the BIOS firmware update as shown in Figure 26. A notification will be displayed to inform whether a BIOS update was successful or not.

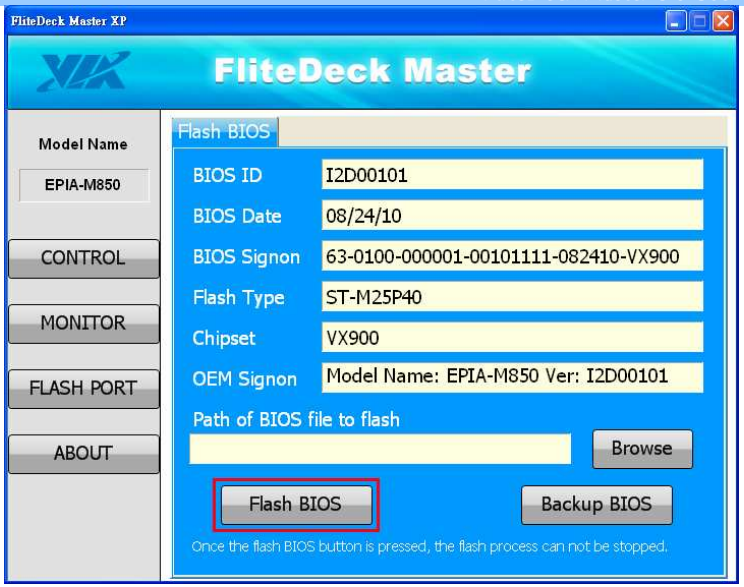

Figure 26

IMPORTANT:

Do not interrupt the BIOS flashing procedure once it has started. Interrupting the BIOS flashing procedure will result in a corrupted BIOS. If the BIOS firmware is corrupted, then the system will not be able to boot up.

3.5. About

The **About** menu category displays the software version, supported OS, release date, and VIA's copyright declaration. See Figure 27 below.

Figure 27

VIA Embedded

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