Kramer Electronics, Ltd.

Firmware Upgrade Guide
VS-3232A

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This Guide explains how to upgrade the firmware for the **VS-3232A**.

You can upgrade the firmware in the flash memory of the:

- Switcher Microcontroller (see Section 1)
- Ethernet Microcontroller (see Section 2)

1   Upgrading the Switcher Flash Memory

The **VS-3232A** firmware is located in FLASH memory, which can be upgraded to the latest Kramer firmware version in minutes! The process involves:

- Downloading from the Internet (see Section 1.1)
- Connecting the PC to the RS-232 port (see Section 1.2)
- Upgrading Firmware (see Section 1.3)

1.1   Downloading from the Internet

You can download the up-to-date file[1] from the Internet. To do so:

1. Go to our Web site at http://www.Kramerelectronics.com and download the file: "*FLIP_VS3232A.zip*" from the Technical Support section.
2. Extract the file: "*FLIP_VS3232A.zip*" to a folder (for example, C:\Program Files\Kramer Flash).
3. Create a shortcut on your desktop to the file: "*FLIP.EXE*".

1.2   Connecting the PC to the RS-232 Port

Before installing the latest Kramer firmware version on a **VS-3232A** unit, do the following:

1. Turn the unit OFF.
2. Connect the RS-232 9-pin D-sub rear panel port.
3. Push the rear panel FLASH MAIN button through the hole using a small screwdriver.
4. Switch the unit ON.

> **Note**: This sequence is critical:
> First push the FLASH MAIN button,
> and then turn on the unit

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1 The files indicated in this section are given as an example only. File names are liable to change from time to time

1.3   Upgrading the Firmware

Follow these steps to upgrade the firmware:

1. Double click the desktop icon: "*Shortcut to FLIP.EXE*".
    The Splash screen appears as follows:

Figure 1: Splash Screen

2. After a few seconds, the Splash screen is replaced by the "*Atmel –
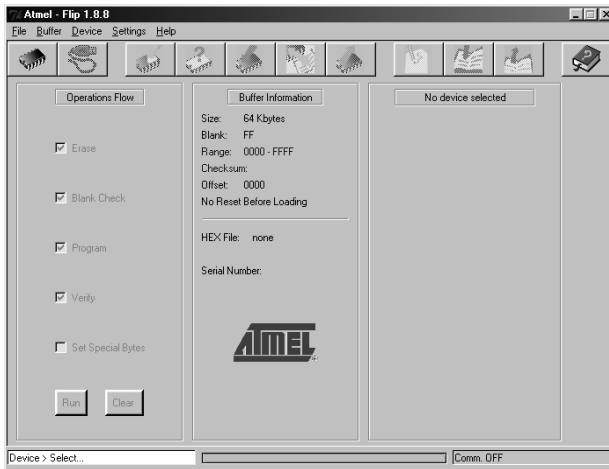   Flip*" window:

Figure 2: Atmel – Flip Window

3. Press the keyboard shortcut key *F2* (or select the "*Select*" command
    from the *Device* menu, or press the integrated circuit icon in the upper
    right corner of the window).
    The "*Device Selection*" window appears:

Figure 3: Device Selection Window

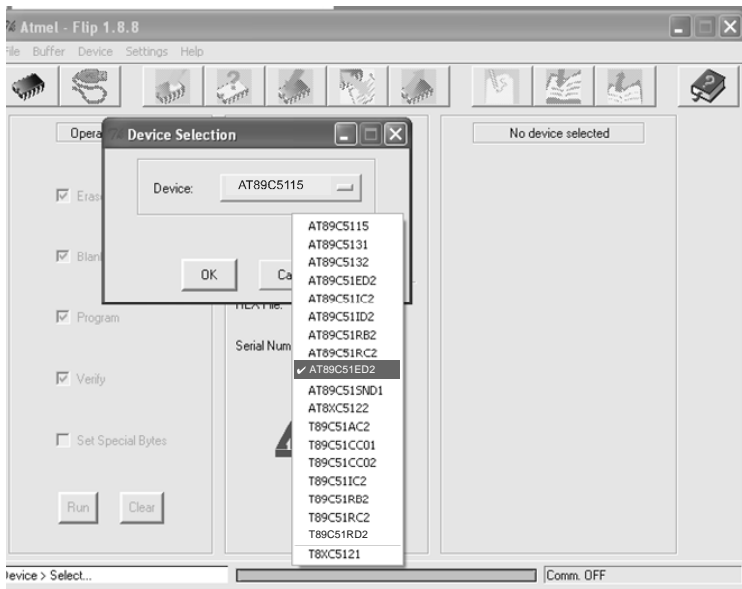4. Click the button next to the name of the device and select from the list: AT89C51ED2:

Figure 4: Device Selection window

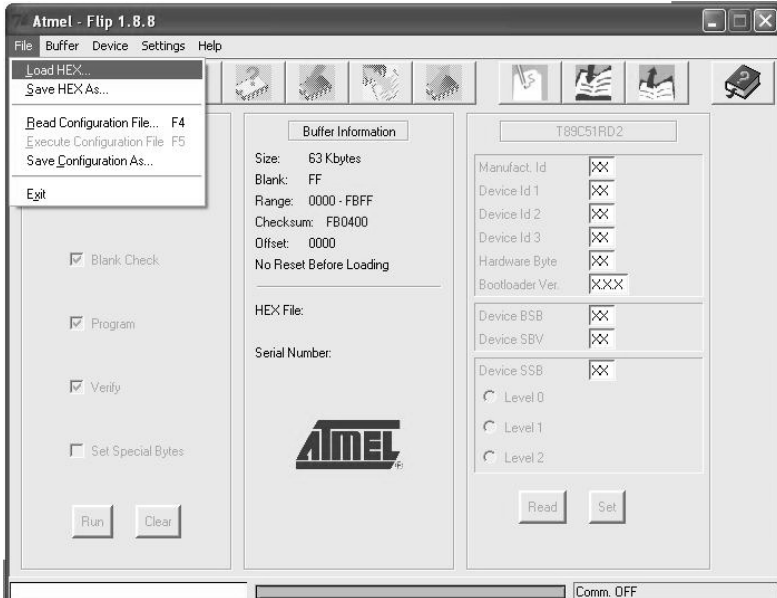5. Click OK and select "*Load Hex*" from the *File* menu.

Figure 5: Loading the Hex

6. The Open File window opens. Select the correct HEX file that contains the updated version of the firmware for **VS-3232A** (for example *32M_V1p2.hex*) and click Open.

7. Press the keyboard shortcut key *F3* (or select the "*Communication / RS232*" command from the *Settings* menu, or press the keys: *Alt SCR*). The "*RS232*" window appears. Change the COM port according to the configuration of your computer and select the 9600 baud rate:
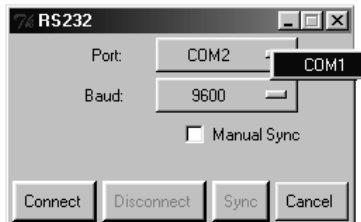

Figure 6: RS-232 Window

8. Click Connect.
In the "*Atmel – Flip*" window, in the *Operations Flow* column, the *Run* button is active, and the name of the chip appears as the name of the third column: *AT89C51RD2*.
Verify that in the *Buffer Information* column, the
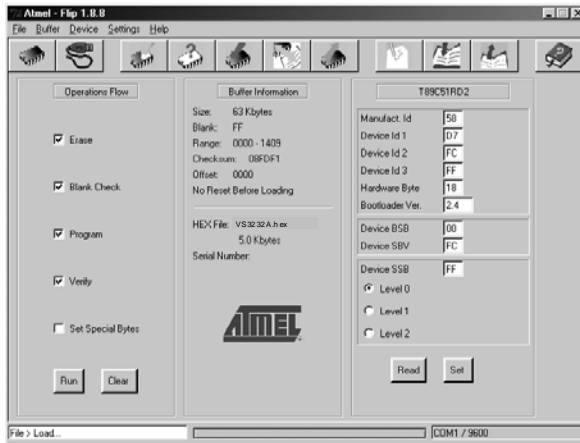"*HEX File: VS3232A.hex*" appears.

Figure 7: Atmel – Flip Window (Connected)

9. Click *Run*.
    After each stage of the operation is completed, the check-box for that stage becomes colored green[1].
    When the operation is completed, all 4 check-boxes will be colored green and the status bar message: *Memory Verify Pass* appears[2]:
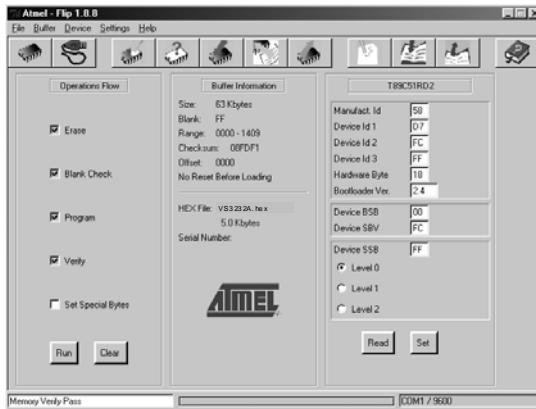

Figure 8: Atmel – Flip Window (Operation Completed)

10. Close the "*Atmel – Flip*" window.
11. Disconnect the power on the **VS-3232A**.

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1 See also the blue progress indicator on the status bar

2 If an error message: "Not Finished" shows, click Run again

12. If required, disconnect the *RS-232* rear panel port on the **VS-3232A** unit from the Null-modem adapter.
13. Release the FLASH MAIN button on the rear panel.
14. Connect the power to the **VS-3232A**.
    Upon initialization, the new **VS-3232A** software version shows in the INPUT STATUS 7-segment Display.

2   Upgrading the Ethernet Flash Memory

The **VS-3232A** Ethernet firmware is located in FLASH memory, which lets you upgrade to the latest Kramer firmware version in minutes!

The process involves:

- Downloading the upgrade package from the Internet
- Connecting the PC to the RS-232 port
- Upgrading the firmware

2.1   Downloading from the Internet

You can download the up-to-date file[1] from the Internet. To do so:

1. Go to our Web site at http://www.Kramerelectronics.com and download the file: "*SetKFRETH11-xx.zip*" from the technical support section.
2. Extract the file "*SetKFRETH11-xx.zip*" package, which includes the KFR-Programmer application setup and the *.s19* firmware file, to a folder (for example, C:\Program Files\KFR Upgrade).
3. Install the KFR-Programmer Application.

2.2   Connecting the PC to the RS-232 Port

Before installing the latest Kramer Ethernet firmware version on the **VS-3232A**, do the following:

1. Connect the RS-232 IN 9-pin D-sub port (COM 1) on the **VS-3232A** to a Null-modem adapter and connect the Null-modem adapter with a 9-wire flat cable to the RS-232 9-pin D-sub COM port on your PC.
2. Push the rear panel ETHERNET FLASH button to **Program** using a small screwdriver.
3. Connect the power on your machine.

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1 File names are liable to change from time to time

2.3 Upgrading the Firmware

Follow these steps to upgrade the firmware:

1. Double click the KFR-Programmer desktop icon.
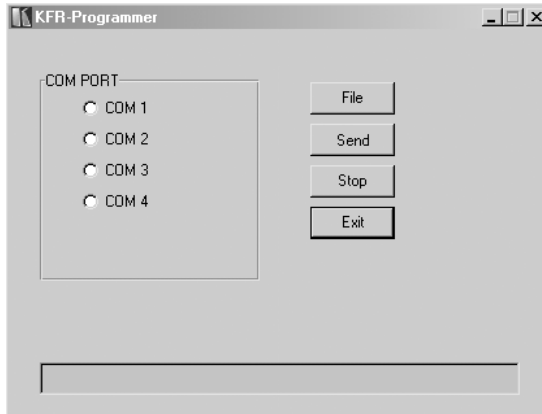   The KFR-Programmer window appears (see Figure 9).

Figure 9: The KFR-Programmer Window

2. Select the required COM Port[1].
3. Press the File button to select the *.s19* firmware file included in the package.
4. Press the Send button to download the file. The Send button lights red.
5. Wait until downloading is completed and the red Send button turns off.
6. Disconnect the power on the **VS-3232A**.
7. Release the ETHERNET FLASH button on the rear panel.
8. Connect the power on your machine.

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1 To which the VS-3232A is connected on your PC