Kramer Electronics, Ltd.



# Kramer K-UPLOAD Guide Revision 2

Intended for Kramer Technical Personnel or external System Integrators. To check that you have the latest version, go to the DOWNLOADS section of our Web site at: <u>http://www.kramerelectronics.com/support/downloads.asp</u>

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#### 1 Introduction

This document describes the functionality of the K-UPLOAD application which can upload a multi-file package (\*.kpt or a single file, such as \*.kfw (firmware), \*.rbf (FPGA binary) and so on, depending on the specific device) to a device.

Kramer's high quality machines usually require the uploading of several files, such as firmware version, FPGA version (sometimes more than one), different binary files, and so on.

Uploading each of these files separately may cause version mismatches which can lead to irregular machine behavior. To solve this problem, all new utility uploads are prepared in one upload package (\*kpt) that includes all the data needed to upgrade the machine to a new version.

# 2 Using K-UPLOAD

Upgrade should be carried out by skilled technical personnel. Failure to upgrade correctly will result in the malfunction of the machine

To use K-UPLOAD:

- Download the software from the Internet
- Connect the PC to the machine

#### 2.1 Downloading from the Internet

The latest version of K-UPLOAD and installation instructions can be downloaded from the Kramer Web site at <u>www.kramerelectronics.com</u>

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

- 1. Go to our Web site at <u>www.kramerelectronics.com</u> and download the file: "kUpload.msi" from the Technical Support section.
- 2. Install the Program.

#### 2.2 Connecting the PC to the Machine

To use K-UPLOAD you have to connect the PC to the machine via RS-232, USB or the Ethernet (defined in the user manual of the machine).



# 3 Using the utility

The following sections describe how to use K-UPLOAD.

1. Double click the K-UPLOAD desktop icon. The main screen appears:

| 80334k   | Upload File        |        |
|--|--------------------|--------|
| Not connected                                  | Select File:       |        |
| (  | File Type: UNKNOWN | Browse |
|  | File CRC: UNKNOWN  |        |
| (  | Progress           |        |
| t (  |                    | 0%     |
| (  |                    |        |
|  | Do not check CRC   | Upload |
| (  |                    |        |
| 000 , 000 , 000 , 000                          |                    |        |
| 000 . 000 . 000 . 000                          |                    |        |
| 000 . 000 . 000 . 000                          |                    |        |
| 000 . 000 . 000 . 000<br>000 . 000 . 000 . 000 |                    |        |

Figure 1: The Main Screen

2. Click the **Connect** button to connect to the machine. The connect dialog appears:

| 🔟 Connect    |                           | ×   |
|--------------|---------------------------|-----|
| Connection M | ethod                     |     |
| Ethernet     | IP: (192 . 168 . 001 . 03 | 9   |
|              | Port: 50000               |     |
|              | Default                   |     |
| C Serial     | СОМЗ                      | -   |
| C USB        | COM10<br>Refresh Ports    |     |
|              | Connect                   | cel |

Figure 2: Connect to the Machine

3. Select the connection method and click **Connect**. If the connection fails, an error message appears:

Using the utility

| K-UPLOA       | .D                 |              |               |             |   | _ ×    |
|---------------|--------------------|--------------|---------------|-------------|---|--------|
| File Help     |                    |              |               |             |   |        |
| Connect       |                    |              |               |             |   |        |
| Device Proper | ties               | Connect      |               | ×           |   |        |
| Connection    | Not connected      | Connection M | lethod        |             |   | ]      |
| Unit Name     | (                  | • Ethernet   | IP: (192.168  | . 001 . 030 |   | Browse |
| Unit Model    |                    |              | Port: 50000   |             |   |        |
| Serial Number |                    | Error        |               | ×           |   |        |
| UDP Local Po  | t                  | Connec       | tion time out |             |   |        |
| TCP Local por |                    |              |               | CLOSE       |   | UPLOAD |
| K-Net-ID      |                    | U USD        | ГСОМТО        |             | J |        |
| MAC           | (                  |              | Refres        | h Ports     |   |        |
| IP            | 000 . 000 . 000 .  |              |               |             |   |        |
| Gateway       | (000 . 000 . 000   |              | Connect       | Cancel      |   |        |
| Mask          | (000 . 000 . 000 . | . 000 ]      |               | )           |   |        |
| Firmware      | (                  |              |               |             |   |        |
| Sa            | ve Cano            | cel          |               |             |   | Exit   |

Figure 3: Communication Error Message

Click CLOSE and then check that the network is functioning, that you used the correct communication method, that the required cables are connected and that the machine is powered.

Click Connect.

| K-UPLOA        | D                       |                    | _ ×    |
|----------------|-------------------------|--------------------|--------|
| File Help      |                         |                    |        |
| Disconnect     |                         |                    |        |
| Device Propert | ies                     | Upload File        |        |
| Connection     | UDP on 192.168.001.039  | Select File:       | ]      |
| Unit Name      | KRAMER_1225             | File Type: UNKNOWN | Browse |
| Unit Model     | PL-50                   | File CRC: UNKNOWN  |        |
| Serial Number  | 30003331225             | Progress           |        |
| UDP Local Por  | 50000                   | 0%                 |        |
| TCP Local port | (5000                   | Do not obsolv CPC  | Upload |
| K-Net-ID       | (01                     |                    |        |
| MAC            | 00-1d-56-00-81-4a       |                    |        |
| IP             | (192 . 168 . 001 . 039) |                    |        |
| Gateway        | (000 . 000 . 000 . 000) |                    |        |
| Mask           | 255 . 255 . 000 . 000   |                    |        |
| Firmware       | 00.09.00.4633           |                    |        |
| Sav            | /e Cancel               |                    | Exit   |

Figure 4: Save Device Properties

4. If required, you can change the device properties data and then click the **Save** button to save the changes, or click **Cancel** to cancel the changes (The Cancel button is actually a refresh button that reads the device properties data).



#### 4 Kramer Package Upload Process

You can upload any of the following files:

- KFW, KFWS : Firmware binary file
- **RBF**: FPGA binary file
- MF, MFS: Memory File
- KPT: the Kramer Package that includes one or more files to upload to a specific unit

You can also upload other files or add them to the **KPT** package; these files will upload via the **LOAD** command only if recognized by K-UPLOAD.

#### 4.1 Upload a Kramer Package File

In the following example, a package file is used to upgrade the Kramer PL-50 machine:

1. Click the **Browse** button to select the package file (or, if required, a single file). The Open window appears:

|                                     |                        |                |                    |         |             | _ ×        |
|-------------------------------------|------------------------|----------------|--------------------|---------|-------------|------------|
| Disconnect                          | Open                   |                |                    |         |             | <u>?</u> × |
| Device Properties<br>Connection UDP | Look in:               | PL-50_4633_    | Web.kpt            | • G 🕫 I | <b>≫ ⊞•</b> |            |
| Unit Name KRA                       | My Recent<br>Documents |                |                    |         |             |            |
| Unit Model PL-5                     | Desktop                |                |                    |         |             |            |
| UDP Local Port 5000                 | ) 🔌                    |                |                    |         |             |            |
| TCP Local port 5000                 |                        |                |                    |         |             |            |
| MAC 01                              | My Computer            |                |                    |         |             |            |
| IP (192                             | My Network             | File name:     | PL-50_4633_Web.kpt |         | • Ope       | n          |
| Gateway 000                         | Places                 | Files of type: | Kramer Files       |         | ▼ Can       | el         |
| Mask (255                           | . 255 . 000 . 000      |                |                    |         |             |            |
| Firmware 00.0                       | 9.00.4633              |                |                    |         |             |            |
| Save                                | Cancel                 | l              |                    |         |             | Exit       |

Figure 5: Select a Package File

 Select a package file (for example, PL-50\_4633\_Web.kpt, downloaded from our Web site at <u>www.kramerelectronics.com</u>) and click Open. This package file includes 37 files.

Note that you can upload each of the files separately, but to avoid file version problems, it is recommended to use the package file

The selected file appears in the Select File area (the program recognizes the file type and is ready to upload it).

Check the "Do not check CRC" box if you want to force file upload.

Otherwise, if the same version is already running on the device, K-UPLOAD will check the current version with the new one: if the current version is the same as the new one, it will not upload that specific file; if the current version is different (older or newer), the new version will be uploaded.

3. Click Upload to upload the files. The following message appears:



Figure 6: Device Upgrade Message

4. Click OK to start the upload process.

| Disconnect       |                        |   |
|------------------|------------------------|---|
| Device Propertio | es                     | Upload File   |
| Connection       | UDP on 192.168.001.039 | Select File: C: FIRMWARE PL-50_4633_Web.kpt   |
| Unit Name        | KRAMER_1225            | File Type: PACKET Browse  |
| Unit Model       | PL-50                  | File CRC: 317d  |
| Serial Number    | (30003331225           | Progress (3/37)   |
| JDP Local Port   | 50000                  | Sending (29%)   |
| FCP Local port   | 5000                   | The second se |
| <-Net-ID         | 01                     | Do not check CHC  |
| MAC              | 00-1d-56-00-81-4a      |   |
| Р                | 192 . 168 . 001 . 039  |   |
| ∋ateway          | 000 . 000 . 000 . 000  |   |
| Mask             | 255 . 255 . 000 . 000  |   |
| Tirmulara        |                        |   |

Figure 7: File Upload

The Upload area shows the file upload progress (which file number is uploaded of the total number of files. For example, 3 files of 37) and the uploaded file status (for example, Sending (29%)):



Kramer Package Upload Process

| K-UPLOAD        | )                      | _ ×   |
|-----------------|------------------------|---|
| Disconnect      |                        |   |
| Device Properti | es                     | Upload File                                 |
| Connection      | UDP on 192.168.001.039 | Select File: C:'FIRMWARE'PL-50_4633_Web.kpt |
| Unit Name       | KRAMER_1225            | File Type: PACKET Browse                    |
| Unit Model      | PL-50                  | File CRC: 6131                              |
| Serial Number   | 30003331225            | Progress (37/37)                            |
| UDP Local Port  | 50000                  | Updating. Please wait                       |
| TCP Local port  | 5000                   |   |
| K-Net-ID        | 01                     |   |
| MAC             | 00-1d-56-00-81-4a      |   |
| IP              | 192 . 168 . 001 . 039  |   |
| Gateway         | 000 . 000 . 000 . 000  |   |
| Mask            | 255 . 255 . 000 . 000  |   |
| Firmware        | 00.09.00.4633          |   |
| Save            | e Cancel               | Exit  |

Figure 8: File Upload Progress

5. Upon completion of this process, you will be asked to restart the unit. Click Restart now:

| К-UPLOAE        | )                       |                                      | -       |
|-----------------|-------------------------|--------------------------------------|---------|
| File Help       |                         |                                      |         |
| Disconnect      |                         |                                      |         |
| Device Properti | es                      | Upload File                          |         |
| Connection      | UDP on 192.168.001.039  | Select File: C:'FIRMWARE'PL-50_4633_ | Web.kpt |
| Unit Name       | KRAMER_1225             | File Type: PACKET                    | Browse  |
| Unit Model      | PL-50                   | File CRC: 6131                       |         |
| Serial Number   | 30003331225 Restar      | t Unit ×                             | l       |
| UDP Local Port  | 50000                   | Do you want to restart the unit now? |         |
| TCP Local port  | 5000                    |                                      |         |
| K-Net-ID        | (01                     | Cancel                               | OPLOAD  |
| MAC             | 00-1d-56-00-81-4a       |                                      |         |
| IP              | (192 . 168 . 001 . 039) |                                      |         |
| Gateway         | 000 . 000 . 000 . 000   |                                      |         |
| Mask            | 255 . 255 . 000 . 000   |                                      |         |
| Firmware        | 00.09,00.4633           |                                      |         |
| Sav             | e Cancel                |                                      | Exit    |
| Sur             | cuncer                  |                                      | CAR     |

Figure 9: Restart the Unit

The machine will restart and then power up.

When the restart process is complete, the unit is updated.

# 5 System Security

K-Upload can be security disabled or enabled:

- If the system is security disabled, the upload process can be carried out without using any password
- If the system is security enabled (by the administrator), you can enter K-Upload as a User or Administrator (password is required)

| g In        |   |
|-------------|---|
| Log in type |   |
| 💿 USER      |   |
|             |   |
| Password    |   |
| C           | ] |

Figure 10: K-Upload Log-in

When logging in as an administrator (ADMIN) you can upload new firmware and change the device properties. When logging in as a user (USER) you can connect to the machine to view the device properties but cannot change them or upload any files:

| 🔣 K-UPLOA      | D                           |                                  | _ ×    |
|----------------|-----------------------------|----------------------------------|--------|
| File Help      |                             |                                  |        |
| Disconnect     | Only an ADMIN authorized us | er can make changes to this unit |        |
| Device Propert | ies                         | Upload File                      |        |
| Connection     | UDP on 192.168.001.039      | Select File:                     | )      |
| Unit Name      | KRAMER_1225                 | File Type: UNKNOWN               | Browse |
| Unit Model     | (PL-50                      | File CRC: UNKNOWN                |        |
| Serial Number  | 30003331225                 | Progress                         |        |
| UDP Local Por  | 50000                       | 0%                               |        |
| TCP Local port | 5000                        |                                  |        |
| K-Net-ID       | 01                          | Do not check CRC                 | OPLOAD |
| MAC            | 00-1d-56-00-81-4a           |                                  |        |
| IP             | (192 , 168 , 001 , 039)     |                                  |        |
| Gateway        | 000 . 000 . 000 . 000       |                                  |        |
| Mask           | 255 . 255 . 000 . 000       |                                  |        |
| Firmware       | 00.09.00.4633               |                                  |        |
| Sav            | Cancel                      |                                  | Exit   |

Figure 11: User Enabled Screen

