U-Boot updater guide v1.4 – Dec 06, 2010

WARNING!
Upgrading the Sam440ep firmware is potentially dangerous.
If something should go wrong during the update, it might leave your system unusable.
In case this should happen, send an email to the following address:
support@acube-systems.com
and ask for help on how to solve the problem.

How to update U-Boot on a Sam440ep board:

Burn the downloaded ISO image on a CD using your preferred burning software.
Do not select "Bootable CD" or any similar option on the burning software.

When the CD is ready, insert it into the CD/DVD reader connected to your Sam board, and press Reset on your computer case.
If the cdrom is the first bootable device, the Updater CD will auto start (otherwise change the boot devices priority accordingly)

Press ENTER at the "Select Boot Option".

Once the image has booted, you will be presented with a warning message.
If you wish to continue with the update, press SPACE.

Warning: pressing SPACE the re-flashing process starts immediately.

The re-flashing process takes only a few seconds and in case the updater finds any problem, it will notify them. After the update is finished, the updater will output a few lines of information and ask you to reset the machine.

To verify if you reflashed correctly to the new U-Boot version, interrupt the boot process, enter the prompt and type "**version**"

```
] version
```

You will see an output similar to this:

```
U-Boot 1.3.1c (Dec 06 2010 – 11:07:33)
```

U-boot 1.3.1c – Dec 06, 2010

What's new:

- fixed wrong setting for the MMUCR register
- introduced a new **Video Option: Console**. Setting it to "**Silent**" will produce a more nice looking boot
  screen (see picture below)
- on Sam440ep-flex: if a SiliconMotion 502 is present, and it's not set as primary video card, the SM502
  I/O and MEM access are disabled in PCI_COMMAND register after initialization. This prevent some
  problems when booting AOS4.1 in a dual gfx card setup.
- on Sam440ep-mini: if a Radeon PCI card is present, and the onboard video card is not set as primary
  video card, the onboard video card I/O and MEM access are disabled in PCI_COMMAND register after
  initialization. This prevent some problems when booting AOS4.1 in a dual gfx card setup.
- solved a problem when assigning IRQ to a video card behind a PCI to PCI Express bridge (RadeonHD)
- Video unit and Sprite unit are switched off on SM502
- solved a problem with the Blitter unit registers not reset to default values at powerup on SM502
- now it's possible to set baudrate to 230400 and 307200 bps (for faster debug output)
- changed boot logo
- reduced font size

new u-boot screen

Alternative way to update U-Boot on your Sam440ep

If, for any reason, you cannot use the ISO image to update U-Boot, you can use TFTP.

This alternative way requires a second machine running a TFTP server (for example, on OS4Depot there is a TFTP server for AmigaOS4)

Copy the file **updater-131c-mini** (for Sam440ep-mini) or the file **updater-131c-flex** (for Sam440ep-flex) on your TFTP server directory.

Stop the boot sequence on the Sam440 and enter the U-Boot prompt by pressing **ESC.**

Execute the **menu** command.

Select the **Boot Sequence / Network Boot Options** menu.

Set the **Server TCP/IP Address** filed to the address of the machine running the TFTP server.

Set the **Local TCP/IP Address** filed to the address of your Sam in the same network of the TFTP server.

Select **Save setting and exit.**

Now you're back at the U-Boot prompt, execute the following command:

tftp 500000 updater-131c-mini (or **updater-131c-flex** for a flex board)

U-boot will load the file over network.

Once loading is finished, execute the command **bootm** and follow the on screen instructions.