

CrossCore XA

Service software guide



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Revision history

Rev	Date	Comments
1.0	2010-07-01	

1. Introduction

This document is primary user guide for *CrossCore XA* and *CrossLink XA* devices.

1.1. Purpose

This user guide contains information of how to access Service functionality of the *CrossCore XA* and *CrossLink XA* products running the Linux operating system. The term *CrossXxx XA* is used to refer both of the device types simultaneously.

1.2. Conventions

Text formats used in this document.

Format	Use
<i>Italics</i>	Paths, filenames, Product names.
Bolded	Command names and important information



Is used to highlight important information.

1.3. References

- [1] CrossXxx XA – Programmers Guide
- [3] CrossXxx XA – Software User Guide

2. Service page

This chapter describes how to access Service-page as well as different functions in service - page.

The screenshot displays the 'Service' page of the CrossCore XA interface. At the top, there is a navigation bar with 'User Software', 'User Settings', 'Device Information', 'Service', and 'Logout'. The 'Service' section is active, showing the following details:

- Service:** Device serial number: S00000003, Manufacture date: 2009-10-12.
- System information:** Hardware version: PA1, Firmware version: 1.0.1.0, FPGA version: 1.0.7.0, Linux version: 2.6.31.6, Uptime: 0 h.
- CPU usage:** User: 7.6%, System: 15.3%, Idle: 76.9%.
- Memory usage:** Total: 126880 kB, Used: 11080 kB, Free: 116068 kB.
- Disk usage:** A table showing usage for Root, /usr/local, and CF-Card.
- Firmware upgrade:** Includes a 'Choose File' button (No file chosen) and an 'Upload firmware' button.
- Data backup:** Links for Backup CF-card content, Backup /usr/local content, Backup eeproms content, and Backup startuplog content.
- Filesystem test:** A dropdown menu for 'Select filesystem' and a 'Test filesystem' button.
- Disk info:** Detailed information for three filesystems: MainRootFS(ubi1), BackupRootFS(ubi0), and UserFS(ubi2).

At the bottom of the page, there is a copyright notice: Copyright © 2010 CrossControl.

2.1. Gaining access

To access Service – page, connect Ethernet and power cable to unit. Turn on the power and let device to boot up. Use web browser to connect address <http://<crosscore-address>:8080>. For login name, use root and password **suseroot**. After login, select **Service** from top – menu.

<crosscore-address> depends on device and DHCP settings. By default the device uses DHCP for acquiring network address, but that can be changed by user.

2.2. Page description

2.2.1. Service

Here are shown general information about the device. Serial number and manufacturing date.

2.2.2. System information

More specific system information is shown here. Uptime is the time device is has been on after last power off, not how long it has been running on total.

2.2.3. CPU usage

Here is shown system CPU usage. Because the way usage information is read during the page is generated there is always few percent “base load” shown.

2.2.4. Memory usage

Device memory usage is reported in this part.

2.2.5. Disk usage

Device disk usage is reported here. USB memory sticks are not included here. Only memories that are in the device. If the CF-card is missing then CF-card value should be ignored.

2.2.6. Firmware upgrade



Warning: An update erases and replaces the old root file system completely! This should not affect contents of */usr/local* or */media/cf*, however backup of important files is advised.

- Under *Firmware upgrade*, click "Browse..."
- Locate and select the upgrade binary package file (*cross-XA-n.n.n.tgz*).
- Click button "Upload software".

Once upload is complete, the page shows the upload complete and now waits for confirmation.

- Tick the checkbox and
- Click “Upgrade” to begin the upgrade procedure.



Do not power off the device, until it reboots itself! When device has booted successfully the status LED will turn green.

2.2.7. Data backup

Unit content can be saved for later use.

2.2.8. Backup CF-card content

Backups CF-card contents.

2.2.9. Backup /usr/local content

Backups /usr/local content that contains user applications and device configuration.

2.2.10. Backup eeprom content

Backups device eeproms content. If the device does not have add-on board, then the module-eeprom will show as empty flash.

2.2.11. Backup startuplog content

Backups linux 'dmesg' content. If device has been running a long time after power up, it might not show all the things that are done in startup since dmesg size is limited.

2.2.12. Filesystem test

Performs simple test to filesystems to see if they are still functioning correctly and are still writable. Filesystem is mounted in read-write – mode in the beginning of the test so write-test can be perform even if the filesystem is mounted as read-only.

2.2.13. Disk info

Information about NAND flash device that contains each filesystem.

Device – Contents that the device is holding and device name

Total amount of logical eraseblocks – Total amount of flash blocks that are reserved for the filesystem. Also reserved size are shown in couple different formats.

Count of bad physical eraseblocks – Total amount of physical bad blocks in NAND flash.

Count of reserved physical eraseblocks – Total amount of physical eraseblocks that are reserved for this filesystem

Size – Size of the filesystem

State – State of the filesystem

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