

Title  
Release Notes CrossCore XA Linux  
SW

Date  
2011-10-07

# RELEASE NOTES

## *CrossCore XA Linux*

### Revision history

Rev	Datum	Author	Comment
PA1	2009-10-16	TT. Hyrsylä	First version
PA2	2009-11-18	TT. Hyrsylä	Second release
PA3	2009-11-27	Teemu Keskinarkaus	Third release
PA4	2010-03-12	TT. Hyrsylä	Fourth release
PA5	2010-05-12	Teemu Keskinarkaus	Fifth release
PA6	2010-06-01	Kalle Huittinen	CAN parts of sixth release details
PA7	2010-06-08	Teemu Keskinarkaus	6 <sup>th</sup> release
PA8	2010-06-10	Teemu Keskinarkaus	v1.0.2.0
PA9	2010-09-09	Teemu Keskinarkaus	v1.0.2.1
PA10	2010-10-06	Teemu Keskinarkaus	v1.0.3.0
PA11	2011-03-16	Kalle Huittinen	v1.0.4.0
PA12	2011-10-05	Marcus Nissemark	v1.1.0.0

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## Introduction

### Purpose

The purpose of the Release Notes is to communicate the major new features and changes in the different releases of *CrossCore XAI Linux*. It also documents known problems and workarounds.

### Scope

The document describes all releases of *CrossCore XAI Linux*.

### References

Tag	Name	Comment
[1]		

## Release history

### CrossCore XA1 Linux – v 1.1.0.0

2011-09-20/2011-10-03, “Marcus Nissemark”, CrossControl, Subversion revision: 2244/2252.

### About this release

This is a tenth release for *CrossCore XA1 Linux* system. It is release 1.1.0.0, and contains the changes from intermediate release 1.0.4.0 as well as the additional items here. This version is built using *CodeSourcery G++ 2010.09-103* and compiler version 4.5.1.

### New features

- Now incorporates proper SFTP functionality with openssh/openssl packages (#24)
- Addition of USB file system mount (#22)

### Solved bugs since last release (v 1.0.3.0)

- WLAN IP address and routing with netfilter and iptables (#27)
- CAN messages are delayed in rapid mode (#29)
- Web GUI improvements (#32)
- GSM modem power cycling improved (#36)
- USB memory automatic mount/unmount improvements (#37)
- Disconnecting a node causes application hard time limit to exceed (#21)
- High CAN Tx load resets the unit (#23)
- Crash with system() call (#26)

### Known bugs and limitations

- GSM power on application shall only be executed once. After on command, the off command needs to be executed for proper shutdown. For checking status while running, AT command should be used.
- Temperature sensor gives no off-the-scale interrupts
- IMPORTANT. Since SSH binaries are updated, the old SSH keys needs to be regenerated (i.e. remove contents under /usr/local/etc/ssh/ immediately BEFORE the main system update, or use web interface afterwards for removal). Otherwise the new SSH binaries will reject the old keys, and SSH access will fail. Backup system SSH access is still valid as before.
- NOTE that the update script has an increased version. This is to allow updates since mtd devices are handled differently after compiler upgrade. This only effects the system if the bootstrap binary requires an update (which it doesn't for this release).

### Versions of components of interest (added/removed)

- openssh 5.1p1
- openssl 0.9.8k
- dropbear 0.52 (removed)

### Target system requirements

This *CrossCore XA1 Linux* system is intended to run on the *CrossCore XA* board HW-version PA2 and higher, and the *CrossCore XA All-Integrated* add-on board HW-version PA2 and higher.

PA1 version boards are still mostly functional, except for the WLAN, which support is dropped.

### Other requirements

N/A

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## Included in this release

From releases 1.0.2.0 and onwards, there will be two packages. The Full Package is targeted for production use, while the Customer Package is meant for updates done by the users of the module. The content of these two packages is specified in the table below.

F = File is in Full Package

C = File is in Customer Package

Name	Version	F	C	Comment/TFS change set
cross-xa1-1.1.1.0-customer.tgz	1.1.1.0		*	Main system web-update package for customer use.
cross-xa1-1.1.0.0-full.tgz	1.1.1.0	*		Complete update package
cross-xa1-fpga-1.0.8.0.mcs	1.0.8.0	*	*	FPGA image
cross-xa1_bootstrap.bin	1.0.4.0	*		Bootstrap image (no update required)
cross-xa1_kernel.bin	1.1.0.0	*		Linux Kernel image
cross-xa1_rootfs.bin	1.1.0.0	*		Ubifs, Root file system
cross-xa1-bs_kernel.bin	1.1.0.0	*		Secondary system Linux Kernel
cross-xa1-bs_rootfs.bin	1.1.0.0	*		Secondary system Root file system
cross-xa1.md5sum	1.1.0.0	*	*	MD5 checksums of images
cross-xa1-devel-1.1.0.0.tgz	1.1.0.0	*	*	Development files
cross-xa1_firmwareupdate_without_backup.bat	1.0.4.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate_without_backup.tcl	1.0.4.0	*		Update configuration for SAM-BA
cross-xa1_firmwareupdate_without_backup-serial.bat	1.0.4.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate.bat	1.0.4.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	1.0.4.0	*		Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	1.0.4.0	*		Update script for SAM-BA
fullup.sh	A8.3	*		Console update script NOTE: Version A8.3 is required from system versions 1.0.4.0 and forward.

## CrossCore XA1 Linux – v 1.0.4.0

2011-03-16, “Kalle Huittinen”, CrossControl, Subversion revision: 2189.

### About this release

This is a ninth release for *CrossCore XA1 Linux* system. It is intermediate release before release 1.1.0.0. This version is built using *CodeSourcery G++ 2010.09-103* and compiler version 4.5.1.

### New features

None

### Solved bugs since last release

- Disconnecting a node causes application hard time limit to exceed (#21)
- High CAN Tx load resets the unit (#23)
- Crash with system() call (#26)

### Known bugs and limitations

- Temperature sensor gives no off-the-scale interrupts
- PA2 Link board GPS-data stream can contain NULL characters

## Versions of components of interest

- AppWeb 2.4.2-2
- Bluez 4.57
- BusyBox 1.14.3
- Dropbear 0.52
- libGlib2 2.20.4
- libExpat 2.0.1
- libncurses 5.6
- libstdc++ 6.0.12
- libXml2 2.7.3
- logrotate 3.7.7
- pppd 2.4.4
- wpa\_supplicant 0.6.10

## Target system requirements

This *CrossCore XA1 Linux* system is intended to run on the *CrossCore XA1* board HW-version PA2 and the *CrossLink XA1* addon board HW-version PA2.

PA1 version boards are still mostly functional, except for the WLAN, which support is dropped.

## Other requirements

N/A

## Included in this release

From releases 1.0.2.0 and onwards, there will be two packages. The Full Package is targeted for production use, while the Customer Package is meant for updates done by the users of the module. The content of these two packages is specified in the table below.

F = File is in Full Package

C = File is in Customer Package

Name	Version	F	C	Comment/TFS change set
cross-xa1-1.0.4.0-customer.tgz	1.0.4.0		*	Main system web-update package for customer use.
cross-xa1-1.0.4.0-full.tgz	1.0.4.0	*		Complete update package
cross-xa1-fpga-1.0.8.0.mcs	1.0.8.0	*	*	FPGA image
cross-xa1_bootstrap.bin	1.0.4.0	*		Bootstrap image
cross-xa1_kernel.bin	1.0.4.0	*		Linux Kernel image
cross-xa1_rootfs.bin	1.0.4.0	*		Ubifs, Root file system
cross-xa1-bs_kernel.bin	1.0.4.0	*		Secondary system Linux Kernel
cross-xa1-bs_rootfs.bin	1.0.4.0	*		Secondary system Root file system
cross-xa1.md5sum	1.0.4.0	*	*	MD5 checksums of images
cross-xa1-devel-1.0.4.0.tgz	1.0.4.0	*	*	Development files
cross-xa1_firmwareupdate_without_backup.bat	1.0.4.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate_without_backup.tcl	1.0.4.0	*		Update configuration for SAM-BA
cross-xa1_firmwareupdate_without_backup-serial.bat	1.0.4.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate.bat	1.0.4.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	1.0.4.0	*		Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	1.0.4.0	*		Update script for SAM-BA
fullup.sh	A8.2	*		Console update script

## CrossCore XA1 Linux – v 1.0.3.0

2010-09-09, “Teemu Keskinarkaus”, CrossControl, Subversion revision: 2162

### About this release

This is an eight release for *CrossCore XA1 Linux* system. This version is built using *CodeSourcery G++ 4.4-93* and compiler version 4.4.1.

### New features

- CAN transmit message prioritization(#9)

### Solved bugs since last release

- CAN error frames received when CrossCore connected to CAN bus with certain devices (#11)
- CAN driver got stuck in rapid mode if not both CAN busses connected (#12)
- CAN SRR bit wrong in Extended Frames(#13)

### Known bugs and limitations

- Temperature sensor gives no off-the-scale interrupts
- PA2 Link board GPS-data stream can contain NULL characters

### Versions of components of interest

- AppWeb 2.4.2-2
- Bluez 4.57
- BusyBox 1.14.3
- Dropbear 0.52
- libGlib2 2.20.4
- libExpat 2.0.1
- libncurses 5.6
- libstdc++ 6.0.12
- libXml2 2.7.3
- logrotate 3.7.7
- pppd 2.4.4
- wpa\_supplicant 0.6.10

### Target system requirements

This *CrossCore XA1 Linux* system is intended to run on the *CrossCore XA1* board HW-version PA2 and the *CrossLink XA1* addon board HW-version PA2.

PA1 version boards are still mostly functional, except for the WLAN, which support is dropped.

### Other requirements

N/A

### Included in this release

From releases 1.0.2.0 and onwards, there will be two packages. The Full Package is targeted for production use, while the Customer Package is meant for updates done by the users of the module. The content of these two packages is specified in the table below.

F = File is in Full Package

C = File is in Customer Package

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Name	Version	F	C	Comment/TFS change set
cross-xa1-1.0.3.0-customer.tgz	1.0.3.0		*	Main system web-update package for customer use.
cross-xa1-1.0.3.0-full.tgz	1.0.3.0	*		Complete update package
cross-xa1-fpga-1.0.8.0.mcs	1.0.8.0	*	*	FPGA image
cross-xa1_bootstrap.bin	1.0.3.0	*		Bootstrap image
cross-xa1_kernel.bin	1.0.3.0	*		Linux Kernel image
cross-xa1_rootfs.bin	1.0.3.0	*		Ubifs, Root file system
cross-xa1-bs_kernel.bin	1.0.3.0	*		Secondary system Linux Kernel
cross-xa1-bs_rootfs.bin	1.0.3.0	*		Secondary system Root file system
cross-xa1.md5sum	1.0.3.0	*	*	MD5 checksums of images
cross-xa1-devel-1.0.3.0.tgz	1.0.3.0	*	*	Development files
cross-xa1_firmwareupdate_without_backup.bat	1.0.3.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate_without_backup.tcl	1.0.3.0	*		Update configuration for SAM-BA
cross-xa1_firmwareupdate_without_backup-serial.bat	1.0.3.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate.bat	1.0.3.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	1.0.3.0	*		Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	1.0.3.0	*		Update script for SAM-BA
fullup.sh	A8.2	*		Console update script

## CrossCore XA1 Linux – v 1.0.2.1

2010-09-09, “Teemu Keskinarkaus”, CrossControl, Subversion revision: 2141

### About this release

This is an intermediate release for *CrossCore XA1 Linux* system before eighth release. This version is built using *CodeSourcery G++ 4.4-93* and compiler version 4.4.1.

### New features

- None

### Solved bugs since last release

- CAN bit timing adjusted
- CAN driver rapid mode functionality improved
- CAN chip won't go so easily to stopped mode

### Known bugs and limitations

- Temperature sensor gives no off-the-scale interrupts
- PA2 Link board GPS-data stream can contain NULL characters

### Versions of components of interest

- AppWeb 2.4.2-2
  - Bluez 4.57
  - BusyBox 1.14.3
  - Dropbear 0.52
  - libGlib2 2.20.4
  - libExpat 2.0.1
  - libncurses 5.6
  - libstdc++ 6.0.12
  - libXml2 2.7.3
  - logrotate 3.7.7
  - pppd 2.4.4
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- wpa\_supplicant 0.6.10

### Target system requirements

This *CrossCore XA1 Linux* system is intended to run on the *CrossCore XA1* board HW-version PA2 and the *CrossLink XA1* addon board HW-version PA2.

PA1 version boards are still mostly functional, except for the WLAN, which support is dropped.

### Other requirements

N/A

### Included in this release

From releases 1.0.2.0 and onwards, there will be two packages. The Full Package is targeted for production use, while the Customer Package is meant for updates done by the users of the module. The content of these two packages is specified in the table below.

F = File is in Full Package

C = File is in Customer Package

Name	Version	F	C	Comment/TFS change set
cross-xa1-1.0.2.1-customer.tgz	1.0.1.0		*	Main system web-update package for customer use.
cross-xa1-1.0.2.1-full.tgz	1.0.2.1	*		Complete update package
cross-xa1-fpga-1.0.7.0.mcs	1.0.7.0	*	*	FPGA image
cross-xa1-fpga-1.0.7.0.mcs.md5	1.0.7.0	*	*	Checksum for FPGA image
cross-xa1_bootstrap.bin	1.0.2.1	*		Bootstrap image
cross-xa1_kernel.bin	1.0.2.1	*		Linux Kernel image
cross-xa1_rootfs.bin	1.0.2.1	*		Ubifs, Root file system
cross-xa1-bs_kernel.bin	1.0.2.1	*		Secondary system Linux Kernel
cross-xa1-bs_rootfs.bin	1.0.2.1	*		Secondary system Root file system
cross-xa1.md5sum	1.0.2.1	*		MD5 checksums of images
cross-xa1-devel-1.0.2.1.tgz	1.0.2.1	*	*	Development files
cross-xa1_firmwareupdate_without_backup.bat	1.0.2.1	*		Update script for SAM-BA
cross-xa1_firmwareupdate_without_backup.tcl	1.0.2.1	*		Update configuration for SAM-BA
cross-xa1_firmwareupdate_without_backup-serial.bat	1.0.2.1	*		Update script for SAM-BA
cross-xa1_firmwareupdate.bat	1.0.2.1	*		Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	1.0.2.1	*		Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	1.0.2.1	*		Update script for SAM-BA
fullup.sh	A8.2	*		Console update script

### CrossCore XA1 Linux – v 1.0.2.0

2010-06-10, “Teemu Keskinarkaus”, CrossControl, Subversion revision: 2087

### About this release

This is a seventh release for *CrossCore XA1 Linux* system. Version is built using *CodeSourcery G++ 4.4-93* and compiler version 4.4.1.

### New features

- Product revision and article number added to web pages

### Solved bugs since last release

- None



## Known bugs and limitations

- Temperature sensor gives no off-the-scale interrupts
- PA2 Link board GPS-data stream can contain NULL characters

## Versions of components of interest

- AppWeb 2.4.2-2
- Bluez 4.57
- BusyBox 1.14.3
- Dropbear 0.52
- libGlib2 2.20.4
- libExpat 2.0.1
- libncurses 5.6
- libstdc++ 6.0.12
- libXml2 2.7.3
- logrotate 3.7.7
- pppd 2.4.4
- wpa\_supplicant 0.6.10

## Target system requirements

This *CrossCore XA1 Linux* system is intended to run on the *CrossCore XA1* board HW-version PA2 and the *CrossLink XA1* addon board HW-version PA2.

PA1 version boards are still mostly functional, except for the WLAN, which support is dropped.

## Other requirements

N/A

## Included in this release

In releases 1.0.2.0 and onwards, there will be two packages. The Full Package is targeted for production use, while the Customer Package is meant for updates done by the users of the module. The content of these two packages is specified in the table below.

F = File is in Full Package

C = File is in Customer Package

Name	Version	F	C	Comment/TFS change set
cross-xa1-1.0.2.0-customer.tgz	1.0.2.0		*	Main system web-update package for customer use.
cross-xa1-1.0.2.0-full.tgz	1.0.2.0	*		Complete update package
cross-xa1-fpga-1.0.7.0.mcs	1.0.7.0	*	*	FPGA image
cross-xa1-fpga-1.0.7.0.mcs.md5	1.0.7.0	*	*	Checksum for FPGA image
cross-xa1_bootstrap.bin	1.0.2.0	*		Bootstrap image
cross-xa1_kernel.bin	1.0.2.0	*		Linux Kernel image
cross-xa1_rootfs.bin	1.0.2.0	*		Ubifs, Root file system
cross-xa1-bs_kernel.bin	1.0.2.0	*		Secondary system Linux Kernel
cross-xa1-bs_rootfs.bin	1.0.2.0	*		Secondary system Root file system
cross-xa1.md5sum	1.0.2.0	*		MD5 checksums of images
cross-xa1-devel-1.0.2.0.tgz	1.0.2.0	*	*	Development files
cross-xa1_firmwareupdate_without_backup.bat	1.0.2.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate_without_backup.tcl	1.0.2.0	*		Update configuration for SAM-BA
cross-xa1_firmwareupdate_without_backup-serial.bat	1.0.2.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate.bat	1.0.2.0	*		Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	1.0.2.0	*		Update configuration for SAM-BA

cross-xa1_firmwareupdate-serial.bat	1.0.2.0	*	Update script for SAM-BA
fullup.sh	A8.2	*	Console update script

## CrossCore XA1 Linux – v 1.0.1.0

2010-06-07, “Teemu Keskinarkaus”, CC Systems, Subversion revision: 2081

### About this release

This is a sixth release for *CrossCore XA1 Linux* system. Version is built using *CodeSourcery G++ 4.4-93* and compiler version 4.4.1.

### New features

- CAN support for automatic bus-off recovery

### Solved bugs since last release

- CAN fixed napi handler in rapid/accurate mode

### Known bugs and limitations

- Temperature sensor gives no off-the-scale interrupts
- PA2 Link board GPS-data stream can contain NULL characters

### Versions of components of interest

- AppWeb 2.4.2-2
- Bluez 4.57
- BusyBox 1.14.3
- Dropbear 0.52
- libGlib2 2.20.4
- libExpat 2.0.1
- libncurses 5.6
- libstdc++ 6.0.12
- libXml2 2.7.3
- logrotate 3.7.7
- pppd 2.4.4
- wpa\_supplicant 0.6.10

### Target system requirements

This *CrossCore XA1 Linux* system is intended to run on the *CrossCore XA1* board HW-version PA2 and the *CrossLink XA1* addon board HW-version PA2.

PA1 version boards are still mostly functional, except for the WLAN, which support is dropped.

### Other requirements

N/A

### Included in this release

Name	Version	Comment/TFS change set
cross-xa1-1.0.1.0.tgz	1.0.1.0	Main system web-update package.
cross-xa1-1.0.1.0-2010-06-07.tar.gz	1.0.1.0	Complete update package; contains the below files.
cross-xa1-fpga.mcs	1.0.7.0	FPGA image
cross-xa1_bootstrap.bin	1.0.1.0	Bootstrap image
cross-xa1_kernel.bin	1.0.1.0	Linux Kernel image
cross-xa1_rootfs.bin	1.0.1.0	Ubifs, Root file system
cross-xa1-bs_kernel.bin	1.0.1.0	Secondary system Linux Kernel

cross-xa1-bs_rootfs.bin	1.0.1.0	Secondary system Root file system
cross-xa1.md5sum	1.0.1.0	MD5 checksums of images
cross-xa1-devel-1.0.1.0.tgz	1.0.1.0	Development files
cross-xa1_firmwareupdate_without_backup.bat	1.0.1.0	Update script for SAM-BA
cross-xa1_firmwareupdate_without_backup.tcl	1.0.1.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate_without_backup-serial.bat	1.0.1.0	Update script for SAM-BA
cross-xa1_firmwareupdate.bat	1.0.1.0	Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	1.0.1.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	1.0.1.0	Update script for SAM-BA
fullup.sh	A8.1	Console update script

## CrossCore XA1 Linux – v 1.0.0.0

2010-05-18, “Teemu Keskinarkaus”, CC Systems, Subversion revision: 2036

### About this release

This is a fifth release for *CrossCore XA1 Linux* system. Version is built using *CodeSourcery G++ 4.4-93* and compiler version 4.4.1.

### New features

- Improved USB device handling
- Update script supports FPGA code updating
- Silent mode for CAN driver
- Service – page added to Configuration interface
- New tools: *smartctl*

### Solved bugs since last release

- CAN driver performance improved

### Known bugs and limitations

- Temperature sensor gives no off-the-scale interrupts
- PA2 Link board GPS-data stream can contain NULL characters
- CAN does not auto recover from bus-off

### Versions of components of interest

- AppWeb 2.4.2-2
  - Bluez 4.57
  - BusyBox 1.14.3
  - Dropbear 0.52
  - libGlib2 2.20.4
  - libExpat 2.0.1
  - libncurses 5.6
  - libstdc++ 6.0.12
  - libXml2 2.7.3
  - logrotate 3.7.7
  - pppd 2.4.4
  - wpa\_supplicant 0.6.10
-

## Target system requirements

This *CrossCore XA1 Linux* system is intended to run on the *CrossCore XA1* board HW-version PA2 and the *CrossLink XA1* addon board HW-version PA2.

PA1 version boards are still mostly functional, except for the WLAN, which support is dropped.

## Other requirements

N/A

## Included in this release

Name	Version	Comment/TFS change set
cross-xa1-1.0.0.tgz	1.0.0.0	Main system web-update package.
cross-xa1-1.0.0-2010-05-18.tar.gz	1.0.0.0	Complete update package; contains the below files.
cross-xa1-fpga.mcs	1.0.7.0	FPGA image
cross-xa1_bootstrap.bin	1.0.0.0	Bootstrap image
cross-xa1_kernel.bin	1.0.0.0	Linux Kernel image
cross-xa1_rootfs.bin	1.0.0.0	Ubifs, Root file system
cross-xa1-bs_kernel.bin	1.0.0.0	Secondary system Linux Kernel
cross-xa1-bs_rootfs.bin	1.0.0.0	Secondary system Root file system
cross-xa1.md5sum	1.0.0.0	MD5 checksums of images
cross-xa1-devel-1.0.0.0.tgz	1.0.0.0	Development files
cross-xa1_firmwareupdate_without_backup.bat	1.0.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate_without_backup.tcl	1.0.0.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate_without_backup-serial.bat	1.0.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate.bat	1.0.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	1.0.0.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	1.0.0.0	Update script for SAM-BA
fullup.sh	A8.1	Console update script

## CrossCore XA1 Linux – v 0.4.0.0

2010-03-12, “Teemu Keskinarkaus”, CC Systems, Subversion revision: 1946

## About this release

This is a fourth release for *CrossCore XA1 Linux* system. Version is built using *CodeSourcery G++ 4.4-93* and compiler version 4.4.1. Note that the compiler version has changed since previous release.

## New features

- Some system startup - scripts checks that hardware actual exists before continue
- Kernel version upgraded to 2.6.31.6
- New WLAN driver for *Quatech* chip. Old *ConnectBlue* (PA1 Link-board) version removed.
- New tools: *setserial*
- New libraries: *libxml2*
- New rapid/accurate operation modes selection available for CAN driver.
- Default power monitor implementation
- Ethernet over USB-device functionality

## Solved bugs since last release

- Configuration from WEB-interface
  - Temp-sensor negative values
  - Connectivity to encrypted WLAN AP's
  - Can driver performance improved
-

### Known bugs and limitations

- Temperature sensor gives no off-the-scale interrupts
- PA2 Link board GPS-data stream can contain NULL characters
- CAN does not auto recover from bus-off

### Versions of components of interest

- AppWeb 2.4.2-2
  - Bluez 4.57
  - BusyBox 1.14.3
  - Dropbear 0.52
  - libGlib2 2.20.4
  - libExpat 2.0.1
  - libncurses 5.6
  - libstdc++ 6.0.12
  - libXml2 2.7.3
  - logrotate 3.7.7
  - pppd 2.4.4
  - wpa\_supplicant 0.6.10
-

## Target system requirements

This *CrossCore XA1 Linux* system is intended to run on the *CrossCore XA1* board HW-version PA2 and the *CrossLink XA1* addon board HW-version PA2.

PA1 version boards are still mostly functional, except for the WLAN, which support is dropped.

## Other requirements

N/A

## Included in this release

Name	Version	Comment/TFS change set
cross-xa1-0.4.0.tgz	0.4.0.0	Main system web-update package.
cross-xa1-0.4.0-2010-03-12.tar.gz	0.4.0.0	Complete update package; contains the below files.
cross-xa1_bootstrap.bin	0.4.0.0	Bootstrap image
cross-xa1_kernel.bin	0.4.0.0	Linux Kernel image
cross-xa1_rootfs.bin	0.4.0.0	Ubifs, Root file system
cross-xa1-bs_kernel.bin	0.4.0.0	Secondary system Linux Kernel
cross-xa1-bs_rootfs.bin	0.4.0.0	Secondary system Root file system
cross-xa1.md5sum	0.4.0.0	MD5 checksums of images
cross-xa1-devel-0.4.0.tgz	0.4.0.0	Development files
cross-xa1_firmwareupdate_without_backup.bat	0.4.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate_without_backup.tcl	0.4.0.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate_without_backup-serial.bat	0.4.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate.bat	0.4.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	0.4.0.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	0.4.0.0	Update script for SAM-BA
fullup.sh	A6	Console update script

## CrossCore XA1 Linux – v 0.3.0.0

2009-11-27, “Teemu Keskinarkaus”, CC Systems, Subversion revision: 1687

### About this release

This is a third release for *CrossCore XA1 Linux* system. Version is built using CodeSourcery G++ 4.3-234 and compiler version 4.3.3.

### New features

- Basic Bluetooth support with tools
- Serial Number Broadcaster
- Watchdog possible to disable completely
- Some system startup - scripts checks that hardware actual exists before continue
- PPP – support
- Automatic Production tests – support
- DIGIO – driver multiple access support
- Bootstrap no longer requires different tool chain to be able to build
- Unit will automatically boot secondary system if main system fails to boot successfully multiple times in a row
- Read buffer to EEPROM driver to speed up multiple reads

### Solved bugs since last release

- Bluetooth driver – not included

### Known bugs and limitations

- No USB-device functionality
  - Temperature sensor gives no off-the-scale interrupts
-

## Target system requirements

*CrossCore XA1 Linux* system is intended to run on the CrossCore XA1 board HW-version PA1.

## Other requirements

N/A

## Included in this release

Name	Version	Comment/TFS change set
cross-xa1-0.3.0.tgz	0.3.0.0	Main system web-update package.
cross-xa1-binaries.bin	0.3.0.0	Complete update package
cross-xa1_bootstrap.bin	0.3.0.0	Bootstrap image
cross-xa1_kernel.bin	0.3.0.0	Linux Kernel image
cross-xa1_rootfs.bin	0.3.0.0	Ubifs, Root file system
cross-xa1-bs_kernel.bin	0.3.0.0	Secondary system Linux Kernel
cross-xa1-bs_rootfs.bin	0.3.0.0	Secondary system Root file system
cross-xa1.md5sum	0.3.0.0	MD5 checksums of images
cross-xa1-devel-0.3.0.tgz	0.3.0.0	Development files
cross-xa1_firmwareupdate_with_backup.bat	0.2.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate_with_backup.tcl	0.2.0.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate_with_backup-serial.bat	0.2.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate.bat	0.1.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	0.1.0.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	0.1.0.0	Update script for SAM-BA
fullup.sh	A4	Console update script



## CrossCore XA1 Linux – v 0.2.0.0

2009-11-18, “Timo T.Hyrsylä”, CC Systems, Subversion revision: 1629

### About this release

This is a second release for *CrossCore XA1 Linux* system. It contains more features than previous one. Version is built using CodeSourcery G++ 4.3-234 and compiler version: 4.3.3

### New features

- All digital inputs can be read at once
- Version of maintenance web-server
- Update procedure from command line
- More system libraries
- CF card mounted as /media/cf
- USB-host: USB-memories auto-mount to /media/usb
- Accelerometer driver
- Watchdog configuration
- CAN driver performance improved
- Secondary system is available
- WLAN driver; iwconfig, iwlist, wpa\_supplicant -tools
- GPS driver -Enable with: modprobe ftdi\_sio
- GSM driver -Enable with: modprobe ftdi\_sio

### Solved bugs since last release

- ssh and scp also with root user.
- localtime zone files added

### Known bugs and limitations

- No USB-device functionality
  - Temperature sensor gives no off-the-scale interrupts
  - Bluetooth driver – not included
-

## Target system requirements

*CrossCore XA1 Linux* system is intended to run on the CrossCore XA1 board HW-version PA1

## Other requirements

N/A

## Included in this release

Name	Version	Comment/TFS change set
cross-xa1-0.2.0.tgz	0.2.0.0	Main system web-update package.
cross-xa1-binaries.bin	0.2.0.0	Complete update package
cross-xa1_bootstrap.bin	0.2.0.0	Bootstrap image
cross-xa1_kernel.bin	0.2.0.0	Linux Kernel image
cross-xa1_rootfs.bin	0.2.0.0	Ubifs, Root file system
cross-xa1-bs_kernel.bin	0.2.0.0	Secondary system Linux Kernel
cross-xa1-bs_rootfs.bin	0.2.0.0	Secondary system Root file system
cross-xa1.md5sum	0.2.0.0	MD5 checksums of images
cross-xa1-devel-0.2.0.tgz	0.2.0.0	Development files
cross-xa1_firmwareupdate_with_backup.bat	0.2.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate_with_backup.tcl	0.2.0.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate_with_backup-serial.bat	0.2.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate.bat	0.1.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	0.1.0.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	0.1.0.0	Update script for SAM-BA
fullup.sh	A3	Console update script

## CrossCore XA1 Linux – v 0.1.0.0

2009-10-16, “Responsible for release”, CC Systems, Subversion revision: 13xx

### About this release

This is a first release for *CrossCore XA1 Linux* system. It contains bare minimum. System is built using CodeSourcery G++ 4.3-234 and compiler version: 4.3.3

### New features

- Linux

### Solved bugs since last release

- -

### Known bugs and limitations

Many things missing

### Target system requirements

*CrossCore XA1 Linux* system is intended to run on the CrossCore XA1 board HW-version PA1

### Other requirements

N/A

### Included in this release

Name	Version	Comment/TFS change set
cross-xa1_bootstrap.bin	0.1.0.0	Bootstrap image
cross-xa1_kernel.bin	0.1.0.0	Linux Kernel image
cross-xa1_rootfs.bin	0.1.0.0	Ubifs, Root file system
cross-xa1.md5sum	0.1.0.0	MD5 checksums of images
cross-xa1_firmwareupdate.bat	0.1.0.0	Update script for SAM-BA
cross-xa1_firmwareupdate.tcl	0.1.0.0	Update configuration for SAM-BA
cross-xa1_firmwareupdate-serial.bat	0.1.0.0	Update script for SAM-BA