XCENTRIC

Release Notes Firmware Logic and BOOTmonitor

October 2002

BinTec Communications AG

These Release Notes Firmware Logic and BOOTmonitor contain important information about updating the Firmware Logic for the basic unit, the Firmware Logic for the modules and the BOOTmonitor for **XCENTRIC**. The most current version of these release notes can be retrieved from BinTec´s web server at http://www.bintec.de. There the Release Notes Firmware Logic and BOOTmonitor are available on the Download page for **XCENTRIC**.

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1 General Information on Updating Firmware Logic and BOOTmonitor

To take advantage of the new features and improvements of BinTec products, you must regularly update **XCENTRIC**'s software to the latest software version.

XCENTRIC's software can be divided into the following components:

■ System software

■ Firmware Logic for the basic unit

■ Firmware Logic for the modules

■ BOOTmonitor

New versions of the system software for **XCENTRIC** are published at irregular intervals.

You will find the procedure for updating the system software in the **XCENTRIC** User's Guide. The update can be carried out remotely over the WAN, over the LAN or over the serial interface.

To update the Firmware Logic or the BOOTmonitor, there must be a serial connection to **XCENTRIC**.

> **Caution!**
>
> Only update the Firmware Logic or BOOTmonitor if this is expressly recommended by BinTec. It is not normally necessary to reload this software.
>
> The update operation involves the risk that if updating one of these files fails, e.g. due to a power cut, it may no longer be possible to boot **XCENTRIC**.
>
> ➤ The following chapters tell you when an update of Firmware Logic or BOOTmonitor is necessary. Only update the Firmware Logic or BOOTmonitor if this is recommended by BinTec.

1.1 Version of Firmware Logic and BOOTmonitor of XCENTRIC

To determine which version of the Firmware Logic and BOOTmonitor is loaded in your **XCENTRIC**, a serial connection must exist to **XCENTRIC**.

Proceed as follows:

➤ Connect your PC to **XCENTRIC** over a serial connection.

➤ Open a terminal program to set up a connection. (See description for setting up a serial connection in the User's Guide.)

> To restart **XCENTRIC**, use the cmd=reboot command in the SNMP shell.
>
> cmd=reboot is not a command in the usual sense of the term. With this command the MIB variable **biboAdmConfigCmd** is assigned the value *reboot*: this leads to the termination of all currently running Flash operations and then to a restart of the system.

➤ Restart **XCENTRIC**.

XCENTRIC performs various tests:

```
### XCentric start-up ###

DRAM memory         : 8MB  .......        done
Flash test          : ........[0x5288]   done
Ethertest           : ..                 done
Ethernet PHY test   : ...                done
Ethernet looptest   : ...............    done
Dsp test            : ..                 done
Modem module        : ...                done
Slot 2        : S04AB (HW-Rev.:1.3 FW-Rev:1.5)
Slot 3        : 5S0 (HW-Rev.:1.1 FW-Rev:1.3)
Slot 4        : no module
Slot 5        : no module
Slot 6        : 10/100Mbps HUB (HW-Rev.:1.2 FW-Rev:1.0)
Slot 7        : 10/100Mbps HUB (HW-Rev.:1.0 FW-Rev:1.0)
```

The installed modules are detected in Slots 2 to 7. If `no logic for module-id: 0xyz please update` is reported for one or more slots, the right version of Firmware Logic for the modules is not loaded in **XCENTRIC**.

The following message then appears:

```
### XCentric (Hardware-Rev. 1.2, Firmware-Rev. 1.3) ok
###
```

`Firmware-Rev. x.y` tells you which version of the Firmware Logic is currently loaded for the basic unit.

➤ Now press **Space** to enter BOOTmonitor mode:

```
XCentric BOOTmonitor (V. a.b Rev. c from Date)
```

`(V. a.b Rev. c from Date)` tells you which version of the BOOTmonitor is loaded.

1.2   New Firmware Logic and BOOTmonitor

New software is provided by BinTec Communications AG on BinTec's Web server at http://www.bintec.de.

Any software necessary for an update can be found on the Download page for **XCENTRIC**.

> Before updating the Firmware Logic and/or BOOTmonitor, make sure you read the information contained in the current Release Notes Firmware Logic and BOOTmonitor.

2 Updating Firmware Logic for the Basic Unit

On rare occasions, when changes, improvements or errors are fixed, BinTec Communications AG makes available a new Firmware Logic for the basic unit.

2.1 Firmware Logic Currently Available for the Basic Unit

Version 1.6 (logic16.xcm) of the Firmware Logic for the basic unit is currently available on BinTec´s Web server. Compared with the previous version of the Firmware Logic for the basic unit, this version includes software improvements. In addition, an error was removed, which is described in point 4.1 of the release notes 5.1.4 for **XCENTRIC** on BinTec´s Web server. This error concerns a problem that may have occurred when XCM-S04AB and XCM-5S0 modules were installed in a certain way.

> Updating to the Firmware Logic for the basic unit version 1.6 only makes sense if you are running at least system software version 5.1.4.

If you are running at least system software version 5.1.4 (see note above), BinTec recommends updating to the new Firmware Logic for the basic unit, version 1.6.

2.2   Updating the Firmware Logic for the Basic Unit

The update is carried out using the BOOTmonitor. It is possible to update the Firmware Logic, BOOTmonitor and system software in one BOOTmonitor session. If you carry out several updates, you must do this in the following order:

1. Firmware Logic for the basic unit
2. Firmware Logic for the modules
3. BOOTmonitor
4. System software

To carry out an update for the Firmware Logic for the basic unit, proceed as follows:

> **Caution!**
>
> If the update procedure is interrupted, e.g. due to a power cut or switching off **XCENTRIC**, it may no longer be possible to reboot **XCENTRIC**.
>
> ➤ The update procedure for the Firmware Logic for the modules must not be interrupted.

➤ Configure a computer in your local network as TFTP server. For a PC, you can use the TFTP server of DIME Tools (see documentation for **BRICKware for Windows**).

➤ Copy the Firmware Logic update file downloaded from BinTec´s Web server to the TFTP folder on your TFTP server in your local network.

> To restart **XCENTRIC**, use the cmd=reboot command in the SNMP shell.
>
> cmd=reboot is not a command in the usual sense of the term. With this command the MIB-Variable **biboAdmConfigCmd** is assigned the value *reboot*: this leads to the termination of all currently running Flash operations and then to a restart of the system.

➤ Log in to **XCENTRIC** from a computer serially connected to **XCENTRIC** and reboot **XCENTRIC** with cmd=reboot.

XCENTRIC starts:

```
### XCentric start-up ###


DRAM memory        : 8MB  .......        done
Flash test         : ........[0x5288]   done
Ethertest          : ..               done
Ethernet PHY test  : ...              done
Ethernet looptest  : ...............    done
Dsp test           : ..               done
Modem module       : ...              done
Slot 2             : S04AB (HW-Rev.:1.3 FW-Rev:1.5)
Slot 3             : 5S0 (HW-Rev.:1.1 FW-Rev:1.3)
Slot 4             : no module
Slot 5             : no module
Slot 6          : 10/100Mbps HUB (HW-Rev.:1.2 FW-Rev:1.0)
Slot 7          : 10/100Mbps HUB (HW-Rev.:1.0 FW-Rev:1.0)


### XCentric (Hardware-Rev. 1.2, Firmware-Rev. 1.3) ok ###


Press <sp> for boot monitor or any other key to boot system
```

2   Updating Firmware Logic for the Basic Unit

➤ Now press **Space** to enter BOOTmonitor mode.

```
XCentric Bootmonitor (V. 5.1 Rev. 2 from Sep  3 1999)
Copyright (c) by BinTec Communications AG

(1) Boot System
(2) Software Update via TFTP
(3) Software Update via XMODEM
(4) Delete Configuration
(5) Default Bootmonitor Parameters

Your choice>
```

➤ Carry out the software update via TFTP (option 2) in the BOOTmonitor. You must enter the IP address of **XCENTRIC**, the IP address of the TFTP server and the file name of the file for the Firmware Logic for the basic unit.

```
Your choice> 2
Enter local IP address [192.168.1.254]:
Enter IP address of TFTP server [192.168.1.1]:
Enter file name of image [xc514.xcm]: logic16.xcm

Are your entries correct (y or n) ? y
```

➤ Re-examine your settings. If your settings are correct, confirm with `y` and the **RETURN** key.

```
Are your entries correct (y or n) ? y

Starting file transfer ......OK (131124 bytes received)
Checking new image ... OK

Loaded new logic has release 1.6.

*** Don't power-off your router while the update takes
place ***

Do you want to write image to flash (y or n) ? y
```

➤ If no errors have occurred, confirm with `y` to save the new Firmware to Flash.

```
Do you want to write image to flash (y or n) ? y
Image update complete
```

After the message saying the update is finished appears, the BOOTmonitor restarts.

⚠️ **Caution!**

At this point, it is extremely important that **XCENTRIC** is switched on and off, so that there is an interruption to the power supply. Restarting **XCENTRIC** with the `cmd=reboot` command, for example, will damage the equipment.

➤ After a message appears saying the firmware update was successful and the BOOTmonitor is started again, switch **XCENTRIC** off – interrupting **XCENTRIC**´s power supply (by disconnecting the power cord) – and on again.

➤ After the BOOTmonitor is started, switch **XCENTRIC** off – by interrupting **XCENTRIC**´s power supply (disconnect the power cord) – and back on again.

XCENTRIC starts:

```
### XCentric start-up ###



DRAM memory        : 8MB  .......          done
Flash test         : ........[0x5288]    done
Ethertest          : ..                   done
Ethernet PHY test  : ...                  done
Ethernet looptest  : ...............      done
Dsp test           : ..                   done
Modem module       : ...                  done
Slot 2             : S04AB (HW-Rev.:1.3 FW-Rev:1.5)
Slot 3             : 5S0 (HW-Rev.:1.1 FW-Rev:1.3)
Slot 4             : no module
Slot 5             : no module
Slot 6            : 10/100Mbps HUB (HW-Rev.:1.2 FW-Rev:1.0)
Slot 7            : 10/100Mbps HUB (HW-Rev.:1.0 FW-Rev:1.0)



### XCentric (Hardware-Rev. 1.2, Firmware-Rev. 1.6) ok
###



Press <sp> for boot monitor or any other key to boot
system
```

➤ In the line:

```
### XCentric (Hardware-Rev. 1.2, Firmware-Rev. 1.6) ok
###
```

it is now possible to check if the correct new version of the Firmware Logic for the basic unit is displayed, i.e. `Firmware-Rev. 1.6.`

➤ Once the update has been completed successfully, you can carry on using **XCENTRIC**.

3   Updating Firmware Logic for the Modules

If, as described in chapter 1.1, page 6, the module ID of one or more newly installed modules is not detected, it is necessary to update the firmware for the modules. Similarly, BinTec sometimes recommends updating with a revised version of the Firmware Logic for the modules.

The current Firmware Logic for the modules always contains the necessary firmware for all the **XCENTRIC** modules on the market (communication modules and hub modules).

3.1   Firmware Logic Currently Available for the Modules

Currently available from BinTec´s Web server is the improved version 1.4 of the Firmware Logic for the modules (module14.xcm).

> Updating Firmware Logic for the modules with version 1.4 only makes sense if you are running at least system software 5.1.4.
>
> When running older versions of the system software in connection with Firmware Logic for the modules, from version 1.3, ISDN telephones connected to **XCENTRIC** are not supplied with power.

The Firmware Logic for the modules version 1.4 contains the Firmware Logic for the following modules with the IDs shown in the table. (If a module is not detected on starting **XCENTRIC**, see chapter 1.1, page 6, the module ID of the module not detected is always shown.):

Firmware Logic for the modules, version 1.4:

Module ID	Module	Hardware version	Firmware version
20	XCM-5S0	1.0	1.3
21	XCM-5S0	1.1	1.6
22	XCM-5S0	1.2	1.6
11	XCM-S04AB	1.1	1.0
12	XCM-S04AB	1.2	1.6
13	XCM-S04AB	1.3	1.6
40	XCM-HUB	1.0	1.0
41	XCM-HUB	1.1	1.0
42	XCM-HUB	1.2	1.0

Table 3-1:   Module Firmware Logic contained in the Firmware Logic for the modules version 1.4 (module14.xcm)

Provided that you are running at least system software 5.1.4 (see note above), BinTec recommends updating to the new Firmware Logic for the modules, version 1.4.

3.2 Updating the Firmware Logic for the Modules

The update is carried out using the BOOTmonitor. It is possible to update the Firmware Logic, BOOTmonitor and system software in one BOOTmonitor session. If you carry out several updates, you must do this in the following order:

1. Firmware Logic for the basic unit
2. Firmware Logic for the modules
3. BOOTmonitor

4. System software

To carry out an update for the Firmware Logic for the modules, proceed as follows:

Caution!

If the update procedure is interrupted, e.g. due to a power cut or switching off **XCENTRIC**, it may no longer be possible to reboot **XCENTRIC**.

➤ The update procedure for the Firmware Logic for the modules must not be interrupted.

➤ Configure a computer in your local network as TFTP server. For a PC, you can use the TFTP server of DIME Tools (see documentation for **BRICKware for Windows**).

➤ Copy the Firmware Logic update file downloaded from BinTec´s Web server to the TFTP folder on your TFTP server in your local network.

To restart **XCENTRIC**, use the `cmd=reboot` command in the SNMP shell.

`cmd=reboot` is not a command in the usual sense of the term. With this command the MIB-Variable **biboAdmConfigCmd** is assigned the value *reboot*: this leads to the termination of all currently running Flash operations and then to a restart of the system.

➤ Log in to **XCENTRIC** from a computer serially connected to **XCENTRIC** and restart **XCENTRIC** with the command `cmd=reboot`.

XCENTRIC starts:

```
### XCentric start-up ###



DRAM memory      : 8MB  .......        done
Flash test       : ........[0x5288]   done
Ethertest        : ..                 done
Ethernet PHY test : ...               done
Ethernet looptest : ...............   done
Dsp test         : ..                 done
Modem module     : ...                done
Slot 2         : S04AB (HW-Rev.:1.3 FW-Rev:1.5)
Slot 3         : 5S0 (HW-Rev.:1.1 FW-Rev:1.3)
Slot 4         : no module
Slot 5         : no module
Slot 6       : 10/100Mbps HUB (HW-Rev.:1.2 FW-Rev:1.0)
Slot 7       : 10/100Mbps HUB (HW-Rev.:1.0 FW-Rev:1.0)


### XCentric (Hardware-Rev. 1.2, Firmware-Rev. 1.6) ok
###


Press <sp> for boot monitor or any other key to boot
system
```

3   Updating Firmware Logic for the Modules

➤ Now press **Space** to enter BOOTmonitor mode.

```
XCentric Bootmonitor (V. 5.1 Rev. 2 from Sep 3 1999)
Copyright (c) by BinTec Communications AG

(1) Boot System
(2) Software Update via TFTP
(3) Software Update via XMODEM
(4) Delete Configuration
(5) Default Bootmonitor Parameters

Your choice>
```

➤ Carry out the software update via TFTP (option 2) in the BOOTmonitor. You must enter the IP address of **XCENTRIC**, the IP address of the TFTP server and the file name of the file for the Firmware Logic.

```
Your choice> 2
Enter local IP address [192.168.1.254]:
Enter IP address of TFTP server [192.168.1.1]:
Enter file name of image [logic16.xcm]: module14.xcm

Are your entries correct (y or n) ? y
```

➤ Re-examine your settings. If your settings are correct, confirm with y and the **RETURN** key.

```
Are your entries correct (y or n) ? y

Starting file transfer ......OK (196660 bytes received)
Checking new image ... OK

Loaded binary image addr=0x30000 len=0x30000

*** Don't power-off your router while the update takes
place ***

Do you want to write image to flash (y or n) ? y
```

➤ If no errors have occurred, confirm with y to save the new Firmware to Flash.

```
Do you want to write image to flash (y or n) ? y
Image update complete
```

After the message saying the update is finished appears, the BOOTmonitor restarts.

Caution!

At this point, it is extremely important that **XCENTRIC** is switched on and off, so that there is an interruption to the power supply. Restarting **XCENTRIC** with the cmd=reboot command, for example, will damage the equipment.

➤ After a message appears saying the firmware update was successful and then the BOOTmonitor is started, switch **XCENTRIC** off – interrupting **XCENTRIC** ´s power supply (by disconnecting the power cord) – and on again.

3   Updating Firmware Logic for the Modules

➤ After the BOOTmonitor is started, switch **XCENTRIC** off – by interrupting **XCENTRIC** ´s power supply (disconnect the power cord) – and back on again.

XCENTRIC starts:

```
### XCentric start-up ###



DRAM memory        : 8MB  .......          done
Flash test         : ........[0x5288]     done
Ethertest          : ..                    done
Ethernet PHY test  : ...                   done
Ethernet looptest  : ...............       done
Dsp test           : ..                    done
Modem module       : ...                   done
Slot 2             : S04AB (HW-Rev.:1.3 FW-Rev:1.6)
Slot 3             : 5S0 (HW-Rev.:1.1 FW-Rev:1.6)
Slot 4             : no module
Slot 5             : no module
Slot 6            : 10/100Mbps HUB (HW-Rev.:1.2 FW-Rev:1.0)
Slot 7            : 10/100Mbps HUB (HW-Rev.:1.0 FW-Rev:1.0)



### XCentric (Hardware-Rev. 1.2, Firmware-Rev. 1.6) ok
###



Press <sp> for boot monitor or any other key to boot
system
```

➤ Make sure all modules installed have been noticed.

➤ Once the update has been completed successfully, you can carry on using **XCENTRIC**.

4 Updating the BOOTmonitor

BinTec recommends updating the BOOTmonitor. New versions of the BOOT-monitor usually include expansions and new features.

4.1 BOOTmonitor Currently Available

Version 5.2.1 (bmon521.xcm) of the BOOTmonitor is currently available on Bin-Tec´s Web server.

This version of the BOOTmonitor includes a new feature concerning the Flash-card of **XCENTRIC** which is supported from system software 5.2.1 Beta 1. The new version 5.2.1 of the BOOTmonitor allows you to boot **XCENTRIC** with a system software which is saved on the Flashcard. Managing the configuration on the Flashcard is possible with older version of the BOOTmonitor.

Detailed information concerning operations with the Flashcard you will find in the documentation of the system software 5.2.1 Beta 1.

> BinTec recommends updating to the BOOTmonitor 5.2.1:
>
> ■ if you want to boot from the Flashcard
>
> ■ and you want to run **XCENTRIC** with system software 5.2.1 Beta 1 or a higher version.

4.2 Updating the BOOTmonitor

It is possible to update the Firmware Logic, BOOTmonitor and system software in one BOOTmonitor session. If you carry out several updates, you must do this in the following order:

1. Firmware Logic for the basic unit
2. Firmware Logic for the modules

3.   BOOTmonitor

4.   System software

To carry out an update for the BOOTmonitor, proceed as follows:

> **Caution!**
>
> If the update procedure is interrupted, e.g. due to a power cut or switching off **XCENTRIC**, it may no longer be possible to reboot **XCENTRIC**.
>
> ➤ The update procedure for the BOOTmonitor must not be interrupted.

➤ Configure a computer in your local network as TFTP server. For a PC, you can use the TFTP server of DIME Tools (see documentation for **BRICKware for Windows**).

➤ Copy the BOOTmonitor update file downloaded from BinTec´s Web server to the TFTP folder on your TFTP server in your local network.

> To restart **XCENTRIC**, use the cmd=reboot command in the SNMP shell.
>
> cmd=reboot is not a command in the usual sense of the term. With this command, the MIB-Variable **biboAdmConfigCmd** is assigned the value *reboot*: this leads to the termination of all currently running Flash operations and to a restart of the system.

➤ Log in to **XCENTRIC** from a computer serially connected to **XCENTRIC** and reboot **XCENTRIC** with cmd=reboot.

XCENTRIC starts:

```
### XCentric start-up ###


DRAM memory        : 8MB  .......        done
Flash test         : ........[0x5288]   done
Ethertest          : ..                 done
Ethernet PHY test  : ...                done
Ethernet looptest  : ...............    done
Dsp test           : ..                 done
Modem module       : ...                done
Slot 2            : S04AB (HW-Rev.:1.3 FW-Rev:1.6)
Slot 3            : 5S0 (HW-Rev.:1.1 FW-Rev:1.6)
Slot 4            : no module
Slot 5            : no module
Slot 6          : 10/100Mbps HUB (HW-Rev.:1.2 FW-Rev:1.0)
Slot 7          : 10/100Mbps HUB (HW-Rev.:1.0 FW-Rev:1.0)


### XCentric (Hardware-Rev. 1.2, Firmware-Rev. 1.6) ok
###


Press <sp> for boot monitor or any other key to boot
system
```

4   Updating the BOOTmonitor

➤ Now press **Space** to enter BOOTmonitor mode.

```
XCentric Bootmonitor (V. 5.1 Rev. 2 from Sep  3 1999)
Copyright (c) by BinTec Communications AG

(1) Boot System
(2) Software Update via TFTP
(3) Software Update via XMODEM
(4) Delete Configuration
(5) Default Bootmonitor Parameters

Your choice>
```

➤ Carry out the software update via TFTP (option 2) in the BOOTmonitor. You must enter the IP address of **XCENTRIC**, the IP address of the TFTP server and the file name of the file for the Firmware Logic for the basic unit.

```
Your choice> 2
Enter local IP address [192.168.1.254]:
Enter IP address of TFTP server [192.168.1.1]:
Enter file name of image [module14.xcm]: bmon521.xcm

Are your entries correct (y or n) ? y
```

➤ Re-examine your settings. If your settings are correct, confirm with `y` and the **RETURN** key.

```
Are your entries correct (y or n) ? y

Starting file transfer ......OK (131124 bytes received)
Checking new image ... OK

Loaded new bootmoniotr has release 5.2.1.

*** Don't power-off your router while the update takes
place ***

Do you want to write image to flash (y or n) ? y
```

➤ If no errors have occurred, confirm with `y` to update the BOOTmonitor.

```
Do you want to update your bootmonitor (y or n) ? y
Bootmonitor update complete
```

After the message saying the update is finished appears, the BOOTmonitor restarts.

Caution!

At this point, it is extremely important that **XCENTRIC** is switched on and off, so that there is an interruption to the power supply. If the product is just restarted with the `cmd=reboot` command, for example, the equipment may be damaged.

➤ After a message appears saying the firmware update was successful and then the BOOTmonitor is started, switch **XCENTRIC** off and on again, thereby interrupting **XCENTRIC** ´s power supply (by disconnecting the power cord).

4 Updating the BOOTmonitor

➤ After the BOOTmonitor is started, switch **XCENTRIC** off and back on again, by interrupting **XCENTRIC**´s power supply (disconnect the power cord). **XCENTRIC** starts:

```
### XCentric start-up ###


DRAM memory        : 8MB  .......        done
Flash test         : ........[0x5288]   done
Ethertest          : ..                 done
Ethernet PHY test  : ...                done
Ethernet looptest  : ...............    done
Dsp test           : ..                 done
Modem module       : ...                done
Slot 2          : S04AB (HW-Rev.:1.3 FW-Rev:1.6)
Slot 3          : 5S0 (HW-Rev.:1.1 FW-Rev:1.6)
Slot 4          : no module
Slot 5          : no module
Slot 6        : 10/100Mbps HUB (HW-Rev.:1.2 FW-Rev:1.0)
Slot 7        : 10/100Mbps HUB (HW-Rev.:1.0 FW-Rev:1.0)


### XCentric (Hardware-Rev. 1.2, Firmware-Rev. 1.6) ok
###


Press <sp> for boot monitor or any other key to boot
system
```

➤ In the line:

```
XCentric BOOTmonitor(V. 5.2 Rev. 1 from Jul 18 2000)
```

it is now possible to check if the correct new version of the BOOTmonitor is displayed.

➤ Once the update has been completed successfully, you can carry on using **XCENTRIC**.

4   Updating the BOOTmonitor