SAM3X-EK Test Software

Revision Table:
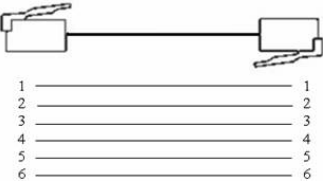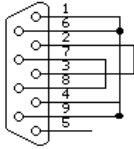
Revision	Date	Comments
1.0	Oct 28, 2010	First version
2.0	Feb 17, 2012	Change SAM-BA from V2.10 to V2.11; modify demo software debug information

Table of Contents

1 Requirements

1.1 Hardware Requirements

SAM3X-EK :		5V power supply :	
serial cross cable :		micro-USB Cable :	
headset:		SD card :	
3V Battery :		Ethernet cross cable :	
RJ12 6pin cable		DB9 Serial loopback plug(Female) :	
PC with serial COM port and USB port Windows2000/XP			

1.2 Software Requirements

An archive file which contains all the test files and tools mentioned in this user guide is provided for use. Please extract all its contents to your local disk just like:
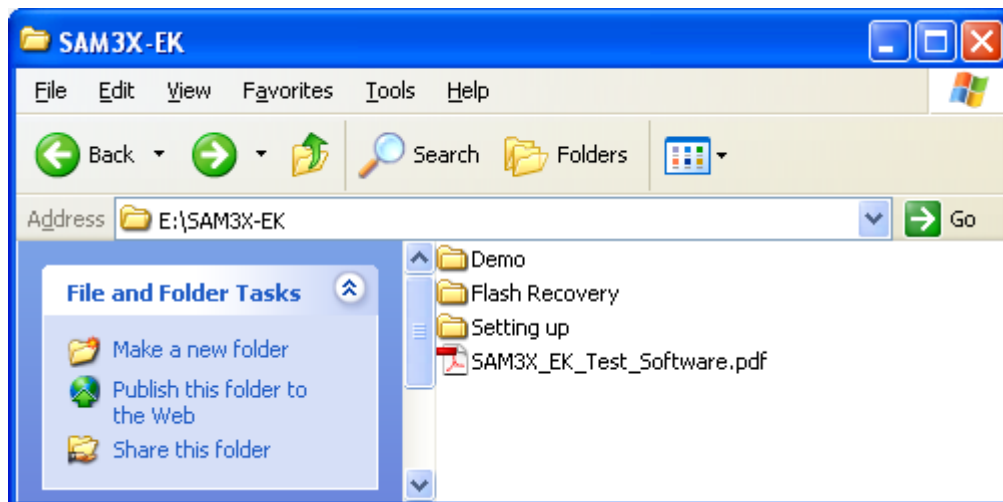
Note: please update antivirus software on your PC with latest virus definition.

2 Preliminary (mandatory) software setup

2.1 SAM-BA

SAM-BA (Boot Assistant) is one of the tools provided in ATMEL AT91 In-System Programming (ISP) solution. It provides an easy way for programming AT91 family microcontrollers using a graphical or command-line interface. It is also possible to create powerful scripts which can then be run via the command line, enabling the automation of many tasks. Those scripts can be hand written by the programmer or recorded through the graphical interface.
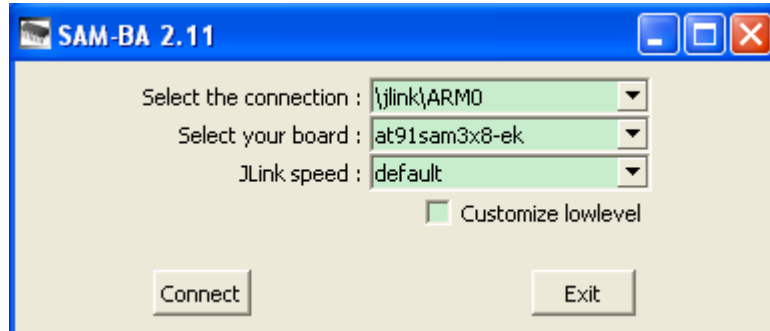
➢ During our test, we will need **SAM-BA** tool to program the testing board. So please install **sam-ba_2.11.exe** provided with this document.

Note: any other version of SAM-BA previously installed on your PC should be removed.

2.2 IP Configuration

Fix your PC IP address manually. Just like below picture showed.
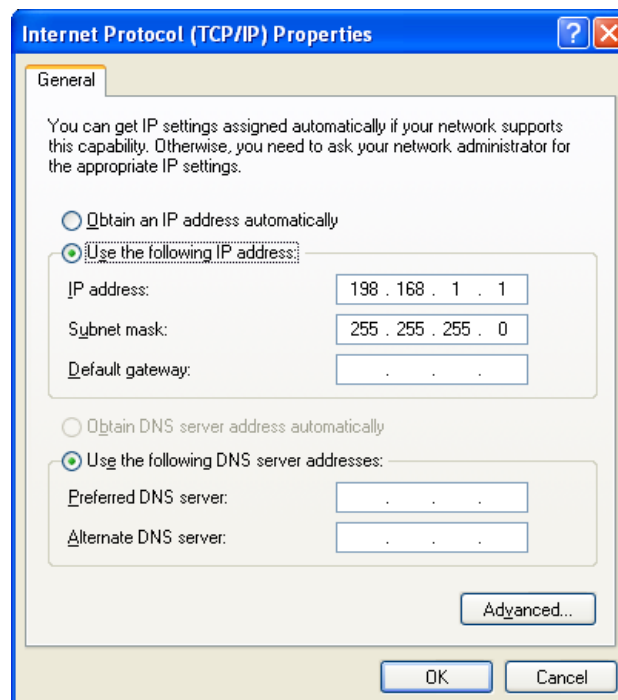
3 Test procedure description

3.1 Production case

```
┌──────────────┐   ┌──────────┐   ┌──────────────┐   ┌──────────┐   ┌──────────┐
│ Check jumpers│   │ Connect  │   │ Power on EK  │   │ Upload   │   │ Execute  │
│ setting and  │──▶│ serial   │──▶│ and open JP6 │──▶│ test SW  │──▶│ test     │──┐
│ close JP6    │   │ cross    │   │              │   │          │   │          │  │
│ (ERASE)      │   │ cable    │   │              │   │          │   │          │  │
└──────────────┘   └──────────┘   └──────────────┘   └──────────┘   └──────────┘  │
```

```
┌──────────┐   ┌────────┐   ┌──────────┐   ┌──────────┐   ┌──────────┐   ┌──────────┐
│ Power    │   │ Close  │   │ Connect  │   │ Power on │   │ Upload   │   │ Power    │
│ off EK   │──▶│ JP6    │──▶│ serial   │──▶│ EK and   │──▶│ demo SW  │──▶│ off EK   │
│          │   │        │   │ cross    │   │ open JP6 │   │          │   │          │
│          │   │        │   │ cable    │   │          │   │          │   │          │
└──────────┘   └────────┘   └──────────┘   └──────────┘   └──────────┘   └──────────┘
```

3.2 End user case

```
┌──────────────┐   ┌──────────┐   ┌──────────────┐   ┌──────────┐   ┌──────────┐   ┌──────────┐
│ Check jumpers│   │ Connect  │   │ Power on EK  │   │ Upload   │   │ Execute  │   │ Power    │
│ setting and  │──▶│ serial   │──▶│ and open JP6 │──▶│ test SW  │──▶│ test     │──▶│ off EK   │
│ close JP6    │   │ cross    │   │              │   │          │   │          │   │          │
│              │   │ cable    │   │              │   │          │   │          │   │          │
└──────────────┘   └──────────┘   └──────────────┘   └──────────┘   └──────────┘   └──────────┘
```

and / or

```
                                                                    ┌──────────┐
                                                                    │ Play with│
                                                                ┌──▶│ demo     │──┐
┌──────────────┐   ┌──────────┐   ┌──────────────┐   ┌─────────┐│   └──────────┘  │  ┌──────────┐
│ Check jumpers│   │ Connect  │   │ Power on EK  │   │ Upload  ││                  ├─▶│ Power    │
│ setting and  │──▶│ serial   │──▶│ and open JP6 │──▶│ demo SW ││                  │  │ off EK   │
│ close JP6    │   │ cross    │   │              │   │         ││   ┌──────────┐  │  └──────────┘
│              │   │ cable    │   │              │   │         │└──▶│ DevStart │──┘
└──────────────┘   └──────────┘   └──────────────┘   └─────────┘    │ contents │
                                                                    │ usage    │
                                                                    └──────────┘
```

4 Jumpers setting

EK boards are delivered with all Jumpers in their default setting.

Summary:

Place all the Jumpers in default setting

Detail:

1. Before the test, please check that all Jumpers are in default status.

The table below lists all Jumpers on EK board and their default setting.

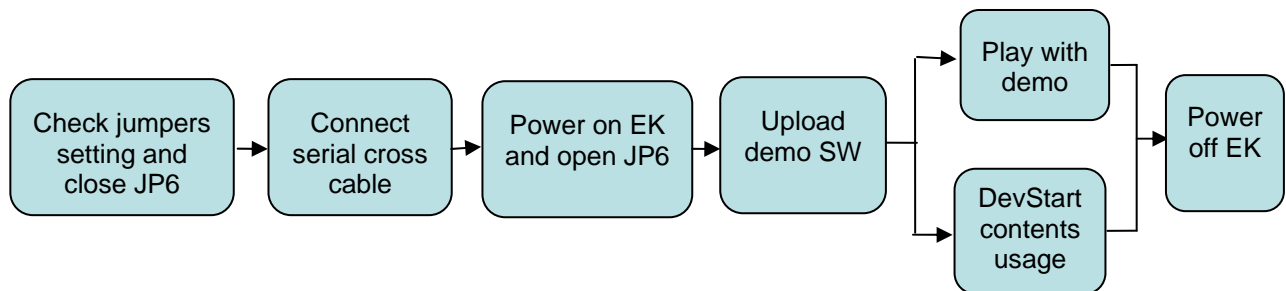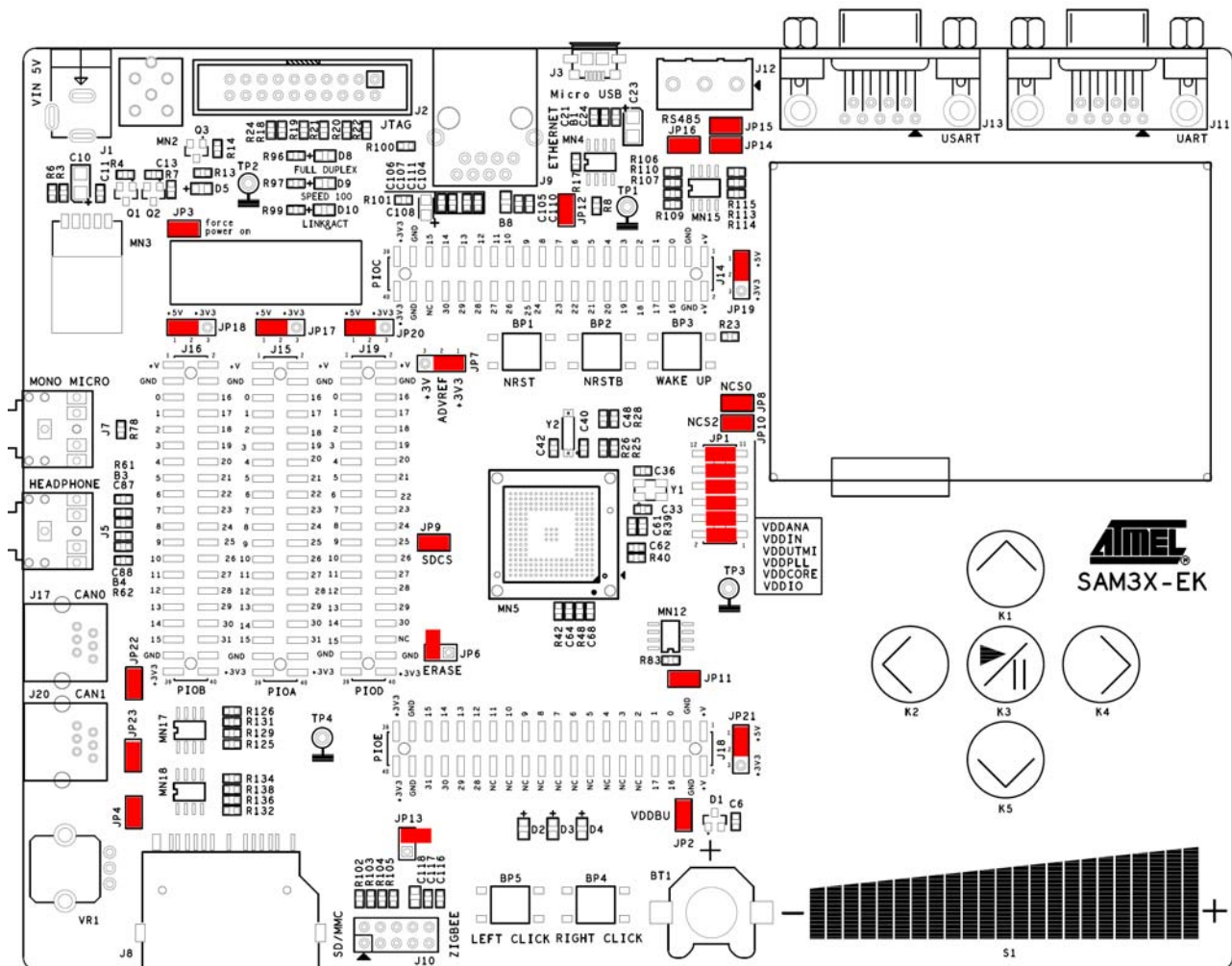| Destination	Label	Default Setting	Feature
JP1-1	VDDIO	CLOSE	Access for current measurement on VDDIO
JP1-2	VDDCORE	CLOSE	Access for current measurement on VDDCORE
JP1-3	VDDPLL	CLOSE	Access for current measurement on VDDPLL
JP1-4	VDDUTMI	CLOSE	Access for current measurement on VDDUTMI
JP1-5	VDDIN	CLOSE	Access for current measurement on VDDIN
JP1-6	VDDANA	CLOSE	Access for current measurement on VDDANA
JP2	VDDBU	CLOSE	Access for current measurement on VDDBU
JP3	FORCE POWER ON	CLOSE	Force +3V3 LDO output valid
JP4	ADC INPUT	CLOSE	ADC input potentiometer
JP6	ERASE	OPEN	Close to reinitialize the Flash contents and some of its NVM bits.
JP7	ADVREF	1-2	Analog reference voltage selection between 3.3V (close 1-2) and 3.0V (close 2-3)
JP8	NCS0	CLOSE	NCS0 enable NAND Flash chip select
JP9	SDCS	CLOSE	SDCS enable SDRAM Flash chip select
JP10	NCS2	CLOSE	NCS1 chip select LCD
JP11	ADDRESS SELECT	CLOSE	EEPROM TWI address select (OPEN:51 CLOSE:50)
JP12	DISMDIX	CLOSE	Enable HP Auto-MDIX mode
JP13	ZIGBEE	CLOSE	Power supply connection/disconnection for the ZigBEE module May also be used as a current measurement point
JP14-JP16	RS485	CLOSE	RS485 bus termination resistors selection
JP17-JP21	PIO expansion connector voltage supply	1-2	Set to 5.0V (position 2-3 sets to 3.3V)
JP22-JP23	CAN	CLOSE	CAN bus termination resistors selection

5 USB driver checking

Summary:


```
[ Close JP6 ] → [ Connect micro-USB cable ] → [ Power on EK ] → [ Verify USB connection on PC ]
```
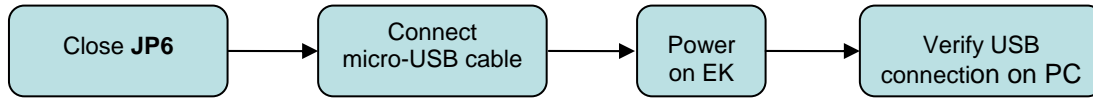
Detail:

1. Close Jumper JP6.
2. Connect EK board to PC via micro-USB Cable.
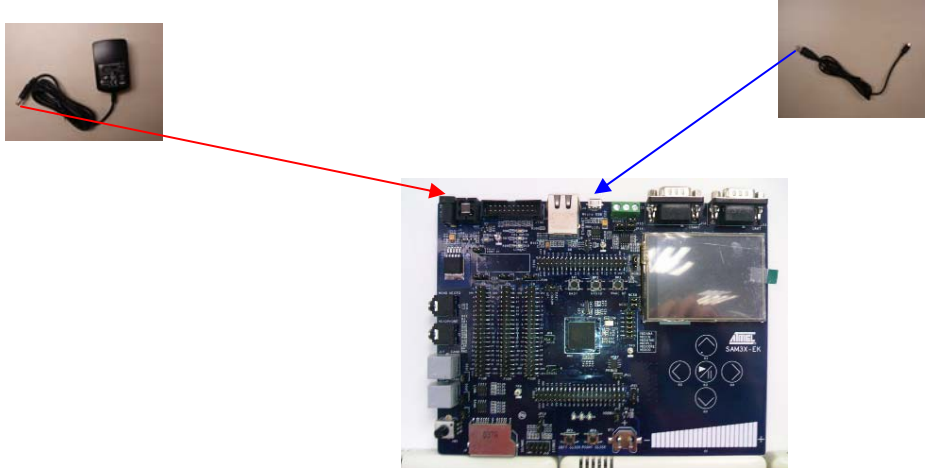
3. Plug in 5V power supply to power on EK board.

   The driver is provided and installed along with the preliminary mandatory SAM-BA installation, but may occasionally need this additional installation:

Select "Yes, this time only"→"Next"
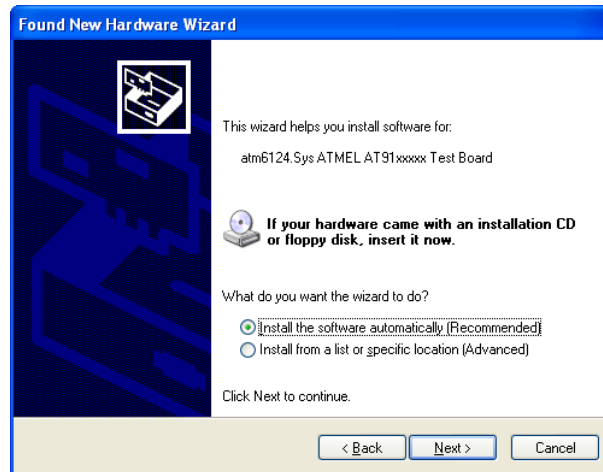
Select "Install the software automatically (Recommended)" →"Next"

Searching for driver and select "Continue Anyway"

Select "Finish".

4.   Verify that the USB connection is established (Device Manager -> Ports will appear **USB to Serial**

Converter).
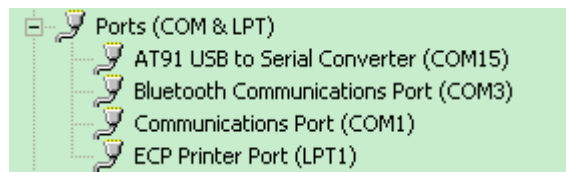
6 Test software upload

Follow below steps to upload test software into the EK board.

Summary:

```
┌──────────────┐      ┌──────────────────┐      ┌──────────────┐
│  Power off EK │ ───▶ │     Connect      │ ───▶ │  Power on    │
│              │      │ Serial cross cable │      │     EK       │
└──────────────┘      └──────────────────┘      └──────────────┘

┌──────────────┐      ┌──────────────────┐      ┌──────────────────┐
│   Upload     │ ◀─── │ Run hyperterminal │ ◀─── │ Re-plug in power  │
│   test SW    │ ───▶ │  (115200, 8, n, 1) │ ───▶ │ supply to reset EK │
└──────────────┘      └──────────────────┘      └──────────────────┘
```
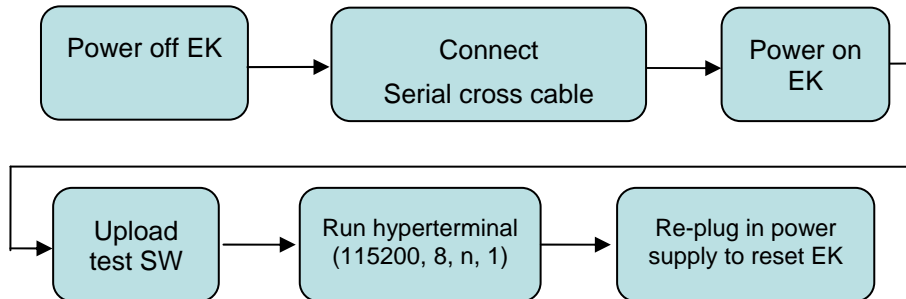
Detail:

1. Connect serial cross cable between EK board and PC COM port.
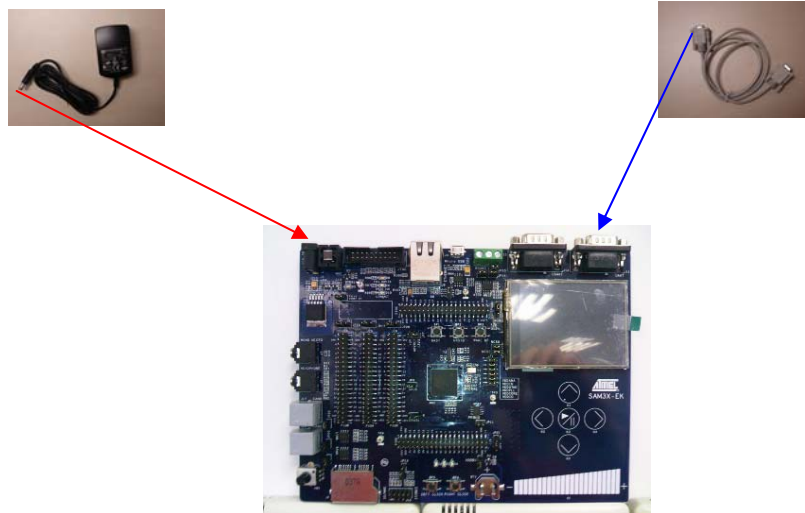
2. Launch *SAM3X-EK.bat* by double-click on it under: *\ Flash Recovery.*

   A MS-DOS Window should appear, like:

3. **Wait** about 10 seconds and **verify** internal flash has been programmed correctly when logfile.log appear at the end of programming.

```
-I- Waiting ...
-I- TCL platform : Windows NT
-I- SAM-BA 2.11  on : windows
-I- Retrieved arguments from command line :
-I- argv 0 : COM1
-I- argv 1 : AT91SAM3X8-EK
-I- argv 2 : SAM3X-EK.tcl
-I- Connection : COM1 (target(comType) = 1)
-I- Board : at91sam3x8-ek
-I- Traces Level : 1
-I- target(handle) : 18443696
Read device Chip ID at 0x400e0640 --- get 0x00000000
Read device Chip ID at 0x400e0740 --- get 0x00000000
Read device Chip ID at 0x400E0940 --- get 0x286e0a60
-I- Found processor : at91sam3x8 (Chip ID : 0x286e0a60)
sourcing device file C:/Program Files/ATMEL Corporation/sam-ba_2.11/sam-
ba.exe/../tcl_lib/devices/at91sam3x8.tcl
sourcing board description file C:/Program Files/ATMEL Corporation/sam-ba_2.11/sam-
ba.exe/../tcl_lib/at91sam3x8-ek/at91sam3x8-ek.tcl
-I- Loading applet applet-lowlevelinit-sam3x8.bin at address 0x20001000
-I- Memory Size : 0x1 bytes
-I- Buffer address : 0x1
-I- Buffer size: 0x0 bytes
-I- Applet initialization done
-I- Low level initialized
-I- External RAM Settings :  extRamVdd=1, extRamType=0, extRamDataBusWidth=16, extDDRamModel=0
-I- Loading applet applet-extram-sam3x8.bin at address 0x20001000
-I- Memory Size : 0x2000000 bytes
-I- Buffer address : 0x20001E0C
-I- Buffer size: 0x0 bytes
-I- Applet initialization done
-I- External RAM initialized
-I- Loading applet applet-flash-sam3x8.bin at address 0x20001000
-I- Memory Size : 0x80000 bytes
-I- Buffer address : 0x200028E4
-I- Buffer size: 0xD300 bytes
-I- Applet initialization done
-I- FLASH initialized
-I- Command line mode : Execute script file : SAM3X-EK.tcl
-I- === SAM3X-EK product test software Programming ===
-I- === Init internal Flash ===
-I- Loading applet applet-flash-sam3x8.bin at address 0x20001000
-I- Memory Size : 0x80000 bytes
-I- Buffer address : 0x200028E4
-I- Buffer size: 0xD300 bytes
-I- Applet initialization done
-I- === Erase internal Flash ===
-I- GENERIC::EraseAll
-I- === Send executable bin into Flash ===
-I- Send File ./Test-board-project-sam3xek.bin at address 0x80000
 first_sector 0 last_sector 3
-I- Complete 0%
-I-             Writing: 0xD300 bytes at 0x0 (buffer addr : 0x200028E4)
-I-             0xD300 bytes written by applet
-I- Complete 90%
-I-             Writing: 0x175F bytes at 0xD300 (buffer addr : 0x200028E4)
-I-             0x175F bytes written by applet
-I- === Chang GPNVM to Boot from Flash ===
```

-I- GPNVM1 set
-I- === End of Flash programming ===

  Close the window of this file.

4. Open hyper terminal console on PC (115200, 8, N, 1).

5. Re-plug in 5V power supply to reset EK board.

   The EK board should boot from internal flash.

6. Check output information on hyper terminal and it looks like:

```
=========================================================
 TEST BOARD APPLICATION
 Board  : SAM3X-EK
 Version: 1.0 (Oct 26 2010 - 10:34:55)
=========================================================


 ---------------------------------------------------------
 Tests list
 ---------------------------------------------------------
  DBGU       01
  Led        02
  Button     03
  LCD        04
  Touch      05
  TWI-ROM    06
  SDRAM      07
  Nand       08
  SDCard     09
  Audio      10
  COM        11
  CAN        12
  EMAC       13
  ADC        14
  SHDW       15
 ---------------------------------------------------------
 -I- Hit 'w' to launch test sequence or
 -I- hit 'x' to do one test
```

7 Test EK board

In this chapter, our test software will perform a full test for components on EK board.

Summary:

```
┌──────────────────┐      ┌──────────────────┐      ┌──────────────────────┐
│  Check jumpers   │ ───► │  Upload test SW  │ ───► │ Execute test (follow the │
│     setting      │      │ (done previously)│      │  procedure explained  │
│                  │      │                  │      │        herein)        │
└──────────────────┘      └──────────────────┘      └──────────────────────┘
```

Detail:

1. Here, we assume test software has been uploaded to the EK board.

    For more information please refer to chapter 6.

2. Make sure the jumpers are set in default setting as explained in chapter. 4

3. Un-plug 5V power supply to power off EK board if connected.
4. Plug DB9 Serial loopback plug to J13 on board.
5. Connect serial cross cable between J11 on board and PC COM port.
6. Connect a headset to J5 and J7 on board.
7. Connect RJ12 6pin cable to J17 and J20 on board.
8. Connect an Ethernet cable between J9 on board and PC Ethernet port.
9. Insert a battery into slot BT1 on board
10. Insert a SD card into slot J3 on board.

The below picture shows the connections:

SD card   3V battery
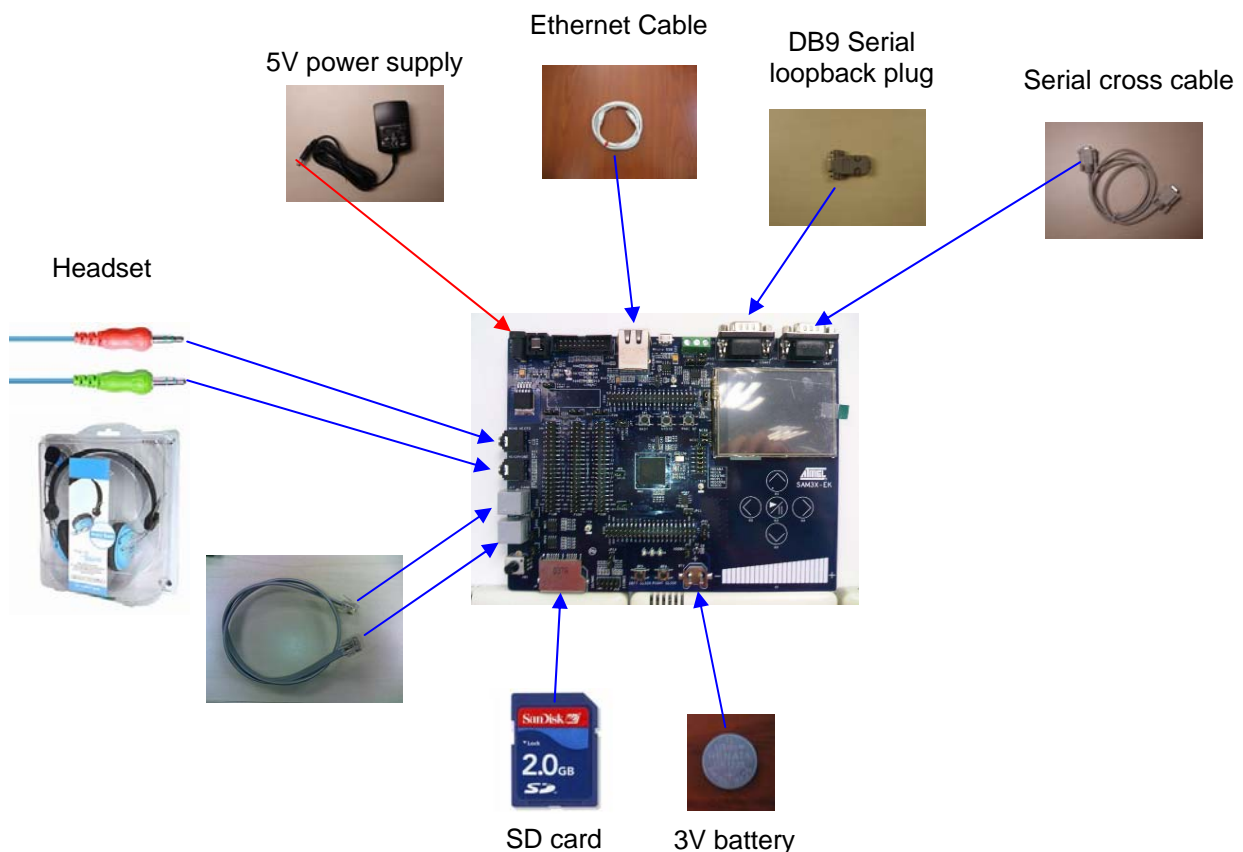
11. Open hyper terminal console on PC (115200, 8, N, 1).
12. Plug in 5V power supply to power on EK board. Test program should start with below info displayed on hyper terminal:

```
========================================================
 TEST BOARD APPLICATION
 Board  : SAM3X-EK
 Version: 1.0 (Oct 26 2010 - 10:34:55)
========================================================


 --------------------------------------------------------
 Tests list
 --------------------------------------------------------
  DBGU      01
  Led       02
  Button    03
  LCD       04
  Touch     05
  TWI-ROM   06
  SDRAM     07
  Nand      08
  SDCard    09
  Audio     10
  COM       11
  CAN       12
  EMAC      13
  ADC       14
  SHDW      15
 --------------------------------------------------------
 -I- Hit 'w' to launch test sequence or
 -I- hit 'x' to do one test
```
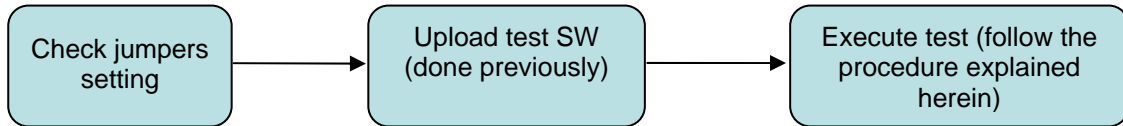
13. Hit 'w' to launch test sequence and test items one by one automatically.

```
 -I- Launch test sequence...
 -I- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
 -I- Test DBGU   : Start...
 -I- Test DBGU   : hit 'Y' if this text is displayed
```

Hit 'Y', you will see:

```
 -I- Test DBGU   : TEST OK !!!
 -I- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
 -I- Test LED    : Start...
 -I- Test LED    : hit 'Y' if the 4 leds are blinking or 'N' if not
```

14. Check Power and USER LEDs are blinking independently.

Have a look on the board and Hit 'Y' if LEDs are tested OK.

```
 -I- Test LED    : TEST OK !!!
 -I- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
 -I- Test BUTTON : Push Buttons Test Start...
 -I- Test BUTTON : If application is in a deadlock, hit a key!!!

 -I- Test BUTTON : BP4
```

15. Push button BP4 and BP5 on EK board.
    Make sure each button tested ok.

    -I- Test BUTTON : BP4   -> Ok
    -I- Test BUTTON : BP5   -> Ok
    -I- >>
    -I- Test LCD   : Start...
    -I- Test LCD   : hit 'Y' if display is OK and 'N' if not

16. Now you should see LCD display like:

    Hit 'Y' if the LCD display is OK.

    -I- Test LCD   : TEST OK !!!

    -I- Test LCD   : (Test Backlight)Start...
    -I- Test LCD   : (Test Backlight)hit 'Y' if backlight is changed and 'N' if not

    Hit 'Y' if LCD backlight can be changed.

    -I- Test LCD   : (Test Backlight)TEST OK !!!

    -I- >>
    -I- Test TSC   : Start...
    -I- Test TSC   : nb tries for calibration : 3

17. Touch the 5 dots on LCD in sequence.

    -I- Test TSC   : Calibration successful !
    -I- Test TSC   : TEST OK !!!

18. Make sure EEPROM SDRAM and NANDFLASH is tested OK.

```
-I- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
-I- Test EEPROM : Start...
-I- Test EEPROM : 0 comparison error(s) found
-I- Test EEPROM : TEST OK
-I- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
-I- Init EBI SDRAM
-I- Test EXTRAM : test interval [0x70000000..0x72000000]
-I- Test EXTRAM : First write 0x55AA55AA&i if i&0=0, 0xAA55AA55&i if not
-I- Test EXTRAM : Then read and compare with the expected value
-I- Test EXTRAM : Start...
-I- Test EXTRAM : Write...
-I- Test EXTRAM : Read and compare...
-I- Test EXTRAM : TEST OK !!!
-I- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
-I- Test NAND   : Start...
-I- Test NAND   : The NAND CS jumper has to be already closed!
-I- Nandflash ID is 0x9580DA2C
-I- Test NAND   : Nandflash driver initialized
-I- Test NAND   : Test on the last block only!
-I- Test NAND   : Test in progress on block: 2047
-I- Test NAND   : TEST OK !!!
-I- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
-I- Test SDCARD : Insert a SDCard and press a key to start...
```

19. Hit a key to start SD card test.
    Make sure SD is tested ok.

```
-I- Please connect a SD card ...
-I- SD card connection detected
-I- Cannot check if SD card is write-protected
-I- DMAD_Initialize channel 0
-I- Card Type 1, CSD_STRUCTURE 0
-I- SD 4-BITS BUS
-I- SD/MMC TRANS SPEED 25000 KBit/s
-I- SD_Init.Cmd16 (3)
-I- Fail to set BLK_LEN, default is 512
-I- SD/MMC card initialization successful
-I- Card size: 14 MB, 29120 * 512B
…..
-I- ** EXT_CSD NOT SUPPORTED
-I- MCK 84000K Hz, MCI Speed 10000K, divisor 3.
-I- Testing block [    91 -     99] ...
-I- >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
-I- Test WM8731 : Start...
-I- Test WM8731 : hit 'Y' if microphone input is OK and 'N' if not
```

20. Hit 'Y' you can hear something via earphone which is received by microphone.
    Make sure CAN BUS and EMAC is tested OK.

        -I- Test WM8731 : OK !!!
        -I- >>
        -I- Test DBGU   : (COM1)Start...
        -I- Test DBGU   : TX/RX OK!
        -I- Test DBGU   : RTS/CTS OK!
        -I- >>
        -I- Test CAN BUS: Start...
        -I- CAN_Synchronisation
        -I- CAN0 Initialisations Completed
        -I- CAN1 Initialisations Completed
        -I- With Interrupt -I- CAN0 Mailbox 0 transmitting to CAN1 Mailbox 0
        -I- Test passed
        -I- With Interrupt -I- CAN0 Mailboxes 1 & 2 transmitting to CAN1 Mailbox 7
        -I- Test passed
        -I- With Interrupt -I- CAN0 Mailboxes 1 & 2 transmitting to CAN1 Mailbox 7
        -I- Wait, wait, wait, wait
        -I- Test passed
        -I- With Interrupt -I- CAN0 Mailbox 3 asking for CAN1 Mailbox 3 transmission
        -I- Test passed
        -I- Without Interrupt -I- CAN0 Mailbox 0 transmitting to CAN1 Mailbox 0
        -I- Test passed
        -I- Without Interrupt -I- CAN0 Mailboxes 1 & 2 transmitting to CAN1 Mailbox 7
        -I- Test passed
        -I- Without Interrupt -I- CAN0 Mailboxes 1 & 2 transmitting to CAN1 Mailbox 7
        -I- Test passed
        -I- Without Interrupt -I- CAN0 Mailbox 3 asking for CAN1 Mailbox 3 transmission
        -I- Test passed
        -I- >>
        -I- Test EMAC   : Start...
        -I- Test EMAC   : -- MAC 3a:1f:34:8:54:54
        -I- Test EMAC   : -- EK`s IP 198.168.1.2
        -I- Test EMAC   : -- PC`s IP 198.168.1.1
        -I- ** Valid PHY Found: 3
        -I- AutoNegotiate complete
        -I- Test EMAC   : EK sends out 100 ARP request and gets 98 replay
        -I- >>
        -I- Test ADC   : Start...
        -I- Test ADC   : Press any key to Quit!!!
        -I- AD1 in=3300mV

21. Test ADC Adjust VR1 and voltage(AD1) range should be 0-3300mV

Press any key if ADC is tested OK.

Then, you can get a summary. Please double check all test items are tested OK.

```
*********************************************************
 Tests result
*********************************************************
  DBGU      : ok
  Led       : ok
  Button    : ok
  LCD       : ok
  Touch     : ok
  TWI-ROM   : ok
  SDRAM     : ok
  Nand      : ok
  SDCard    : ok
  Audio     : ok
  COM       : ok
  CAN       : ok
  EMAC      : ok
  ADC       : ok
*********************** TEST OK **************************
-I- hit any key to continue...
```

Hit any key to continue:

```
-I- Finally,test shutdown and wakeup
-I- Test SHDW   : Start...
-I- Test SHDW   : a battery have to supply the backup power.
-I- Test SHDW   : the Force Power ON jumper have to be opened.
-I- Test SHDW   : the board will be shutdown
-I- Test SHDW   : to restart the board press WAKE UP button
-I- Test SHDW   : press a key to shutdown...
```

Press any key to shutdown the board:

```
-I- Test SHDW   : bye bye !!!
```

Open jumper JP3.

OPTIONALLY
Current measurement:

If you have inserted an amp-meter between jumper JP1-2 at the beginning of test, you should find the current become near zero now.

22. Push WakeUp button BP2 and the board should wake up.

```
=========================================================
TEST BOARD APPLICATION
Board  : SAM3X-EK
Version: 1.0 (Oct 26 2010 - 10:34:55)
=========================================================


--------------------------------------------------------
Tests list
--------------------------------------------------------
 DBGU       01
 Led        02
 Button     03
 LCD        04
 Touch      05
 TWI-ROM    06
 SDRAM      07
 Nand       08
 SDCard     09
 Audio      10
 COM        11
 CAN        12
 EMAC       13
 ADC        14
 SHDW       15
--------------------------------------------------------

-I- Hit 'w' to launch test sequence or
-I- hit 'x' to do one test
```

8 Demo software upload

Summary:

| Close JP6 | → | Connect Serial cross cable | → | Power on EK | → | Open JP6 | → | Upload demo SW | → | Re-plug in power supply to reset EK |
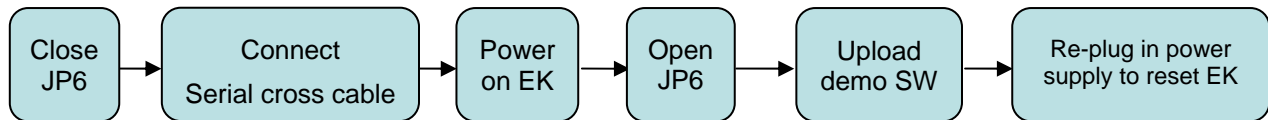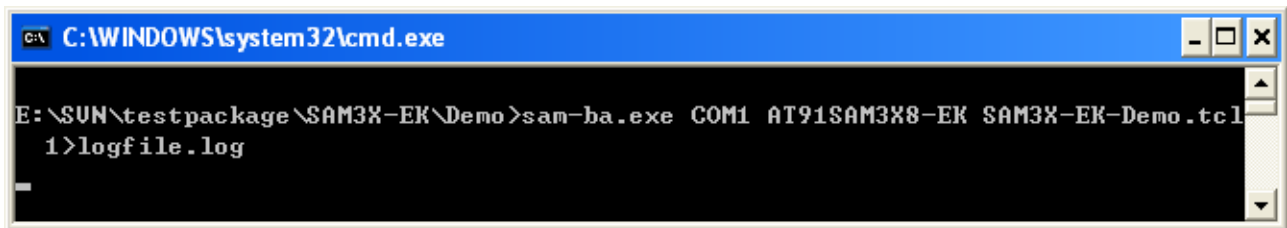
Detail:

8.1 Demo

After this procedure is completed, the board is configured with the default demonstration material it contains upon delivery.
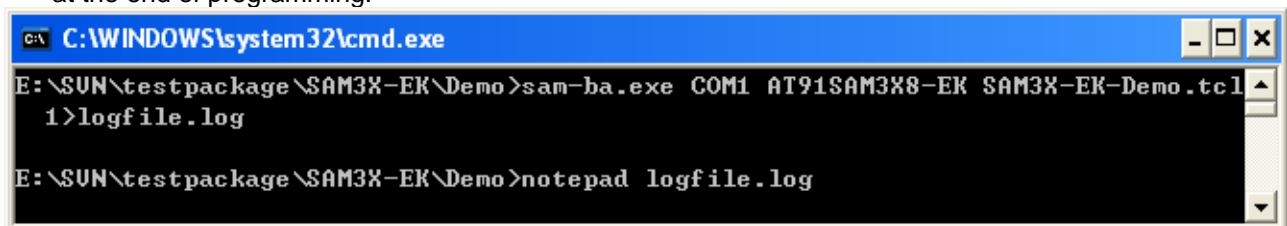
1. Close Jumper JP6 on board.
2. Connect EK Board to PC via serial cross Cable.
3. Plug in 5V power supply to power on EK board.
4. Open Jumper JP6 on board.
5. Launch *prog_flash.bat* by double-click on it in directory: *\ Demo*

```
C:\WINDOWS\system32\cmd.exe
E:\SUN\testpackage\SAM3X-EK\Demo>sam-ba.exe COM1 AT91SAM3X8-EK SAM3X-EK-Demo.tcl
   1>logfile.log
```

7. Wait about 60 seconds and verify internal flash has been programmed correctly when logfile.log appear at the end of programming.

```
C:\WINDOWS\system32\cmd.exe
E:\SUN\testpackage\SAM3X-EK\Demo>sam-ba.exe COM1 AT91SAM3X8-EK SAM3X-EK-Demo.tcl
   1>logfile.log

E:\SUN\testpackage\SAM3X-EK\Demo>notepad logfile.log
```

-I- Waiting ...
-I- TCL platform : Windows NT
-I- SAM-BA 2.11 on : windows
-I- Retrieved arguments from command line :
-I- argv 0 : COM1
-I- argv 1 : at91sam3x8-ek
-I- argv 2 : prog_flash_binaries.tcl
-I- Connection : COM1 (target(comType) = 1)
-I- Board : at91sam3x8-ek
-I- Traces Level : 1
-I- target(handle) : 18444096
Read device Chip ID at 0x400e0640 --- get 0x00000000
Read device Chip ID at 0x400e0740 --- get 0x00000000
Read device Chip ID at 0x400E0940 --- get 0x286e0a60
-I- Found processor : at91sam3x8 (Chip ID : 0x286e0a60)
sourcing device file C:/Program Files/ATMEL Corporation/sam-ba_2.11/sam-ba.exe/../tcl_lib/devices/at91sam3x8.tcl

sourcing board description file C:/Program Files/ATMEL Corporation/sam-ba_2.11/sam-ba.exe/../tcl_lib/at91sam3x8-ek/at91sam3x8-ek.tcl
-I- Loading applet applet-lowlevelinit-sam3x8.bin at address 0x20001000
-I- Memory Size : 0x1 bytes
-I- Buffer address : 0x1
-I- Buffer size: 0x0 bytes
-I- Applet initialization done
-I- Low level initialized
-I- External RAM Settings : extRamVdd=1, extRamType=0, extRamDataBusWidth=16, extDDRamModel=0
-I- Loading applet applet-extram-sam3x8.bin at address 0x20001000
-I- Memory Size : 0x2000000 bytes
-I- Buffer address : 0x20001E0C
-I- Buffer size: 0x0 bytes
-I- Applet initialization done
-I- External RAM initialized
-I- Loading applet applet-flash-sam3x8.bin at address 0x20001000
-I- Memory Size : 0x80000 bytes
-I- Buffer address : 0x200028E4
-I- Buffer size: 0xD300 bytes
-I- Applet initialization done
-I- FLASH initialized
-I- Command line mode : Execute script file : prog_flash_binaries.tcl
-I---
-I- Exemple : Script file correctly executed !
-I---
-I- Send File sam3x_ek_bertos_http_demo.bin at address 0x80000
 first_sector 0 last_sector 13
-I- Complete 0%
-I-   Writing: 0xD300 bytes at 0x0 (buffer addr : 0x200028E4)
-I-   0xD300 bytes written by applet
-I- Complete 24%
-I-   Writing: 0xD300 bytes at 0xD300 (buffer addr : 0x200028E4)
-I-   0xD300 bytes written by applet
-I- Complete 49%
-I-   Writing: 0xD300 bytes at 0x1A600 (buffer addr : 0x200028E4)
-I-   0xD300 bytes written by applet
-I- Complete 73%
-I-   Writing: 0xD300 bytes at 0x27900 (buffer addr : 0x200028E4)
-I-   0xD300 bytes written by applet
-I- Complete 98%
-I-   Writing: 0xE60 bytes at 0x34C00 (buffer addr : 0x200028E4)
-I-   0xE60 bytes written by applet
-I- GPNVM1 set
-I- Send File sd_data.img at address 0xc0000
 first_sector 16 last_sector 31
-I- Complete 0%
-I-   Writing: 0xD300 bytes at 0x40000 (buffer addr : 0x200028E4)
-I-   0xD300 bytes written by applet
-I- Complete 20%
-I-   Writing: 0xD300 bytes at 0x4D300 (buffer addr : 0x200028E4)
-I-   0xD300 bytes written by applet
-I- Complete 41%
-I-   Writing: 0xD300 bytes at 0x5A600 (buffer addr : 0x200028E4)
-I-   0xD300 bytes written by applet
-I- Complete 61%
-I-   Writing: 0xD300 bytes at 0x67900 (buffer addr : 0x200028E4)
-I-   0xD300 bytes written by applet
-I- Complete 82%
-I-   Writing: 0xB400 bytes at 0x74C00 (buffer addr : 0x200028E4)
-I-   0xB400 bytes written by applet
    Close logfile.log file.

6. Insert an Ethernet cable into J9 (make sure there is router in the network, can assign IP address to SAM3X-EK board)
7. Re-plug in 5V power supply to reset EK board and on-board demo should start:
   There will be an IP address on LCD,
8. Launch IE browser on PC, and type IP address that was displayed on EK board's LCD. There will be some information about the board.
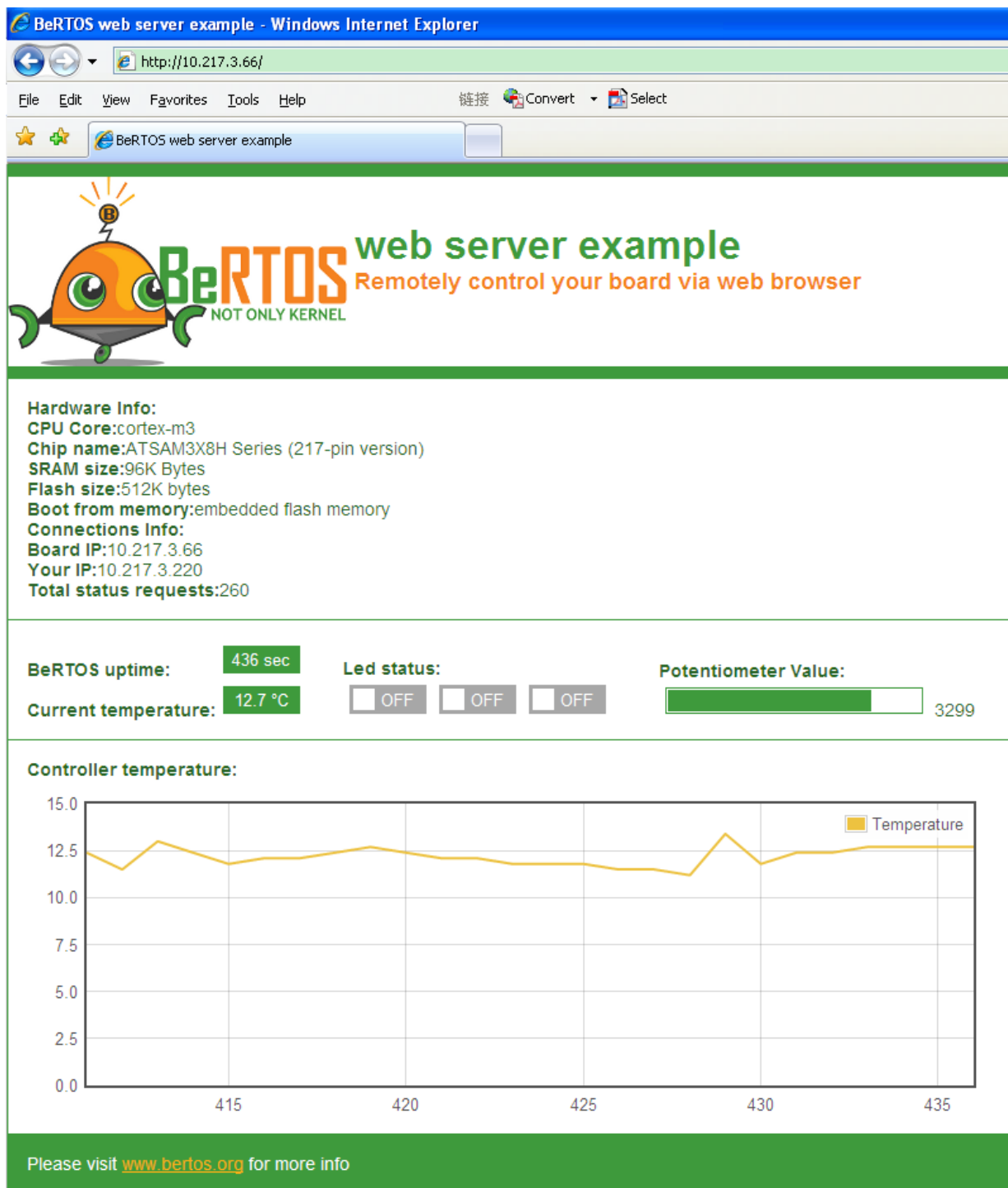
By now, the demo fully functions.

9   Pack EK board

Follow below steps to pack EK board:

1. Disconnect all cables connected to EK board.
2. Set the jumpers back to the default settings described in chapter. 4.
3. Put EK board in a protective anti-static package and pack.