Quick Start for Marvell®'s EV-64260A-BP Evaluation Board

This document will help customer quickly and successfully assemble all the modules and power up Marvell®'s EV-64260A-BP evaluation board.   Please read this document thoroughly before you start any installation. There are few items that you will need in addition to the Marvell®'s EV-64260A-BP evaluation board that are not provided in the evaluation board package.

These are the items that you also need:
1. Null modem serial cable.
2. ATX power supply.
3. HyperTerminal software (you can find this on all Windows OS).
4. Ethernet cable if you plan to use VxWorks BSP later.

The following are the step-by-step guide:

1. Install EV-DEVICES-D144 module into EV-64260A-BP's SO-DIMM connector, P2. (Hint: Hold the module at 45 degree angle and insert it all the way into the connector, then gently press the module toward EV-64260A-BP until you see the side clips locked.   You should hear the "click" sound when it locked).

2. Install the fan into the EV-MPC7400/750-S1 module.
   (NOTE: If you are not familiar with how to install the fan on this type of CPU, follow the steps below.)
   NOTE: DO NOT FORCE THE BRACKET TO SNAP INTO THE CPU BY APPLY PRESSURE FROM THE FAN DOWN ONTO THE CPU. THIS COULD CAUSE DAMAGED TO THE CLIPPER ON THE BRACKET.

   a. Unscrew the bracket from the fan (if it was screwed in the fan).
   b. Slice the bracket onto the CPU (the bracket can be sliced into the CPU from any side).
   c. Screw the fan into the bracket. Make sure the bracket is center on the CPU. Do not over tighten it.

3. Install EV-MPC7400/750-S1 module into EV-64260A-BP's CPU SLOT1 CONNECTOR, P9. The module and its socket are keyed. Observe the key on the module and the socket.
   NOTE: Make sure that the module is firmly installed into the socket. If improperly installed could cause damage to both the CPU module and the socket.

4. Install memory DIMM(s) into EV-64260A-BP's memory DIMM sockets, U17 & U18. The module and its socket are keyed. Observe the key on the module and the

socket. Firmly install the module into the socket and make sure that the thumb ejectors are snapped tight in the knot on each side of the DIMM.

NOTE: If you have only one memory DIMM, you must install this DIMM into the main DIMM socket, U18.

5. Make sure that the power supply switch and EV-64260A-BP power switch (S3) is in the OFF position.

6. Connect an ATX power supply connector to EV-64260A-BP's power supply connector, J60.

7. Connect CPU's fan to an ATX power supply auxiliary connector.

8. Connect one end of a NULL modem cable to EV-64260A-BP's serial connector, P1.

9. Connect the other end of a NULL modem cable to a serial communication port of a PC. You will use Windows' HyperTerminal to communicate to the board.

    NOTE: Make sure that you write down the serial communication port number. You will need it in the HyperTerminal set up in later steps.

10. From the PC, start a HyperTerminal with the following communication port settings:

    NOTE: If you are not familiar with how to set up the HyperTerminal in Windows, here is the path where you can find it:
    Windows NT: Start -> Programs -> Accessories -> HyperTerminal.
    Windows 2000: Start -> Programs -> Accessories -> Communication -> HyperTerminal.

    a. At the "Connection Description" window, type in the name that you want to call this HyperTerminal then press the "OK" button. This will take you to "Connect To" window.

    b. At the "Connect To" window, change the "Connect using:" by click on an arrow and select the "COMx" (where x is the communication port that you connected the serial cable to in the step 9 above), then press the "OK" button. This will bring up the "COMx Properties" window.

    c. Change the communication port settings using the following values:

        Bit per second: 115200
        Data bits: 8
        Parity: none
        Stop bits: 1
        Flow control: none

    d. When done, press the "OK" button.

11. Power up EV-64260A-BP by turn-on the ATX power supply switch and also the switch at S3 on EV-64260A-BP.
    NOTE: As soon as you turn the power on, you should see the debug LEDs (D4, D6, D7) turn ON and stay ON in sequence then all turn OFF at the completion of boot up.

12. At this point you should see the HyperTerminal displays the DINK32 welcome banner and the prompt similar to the one below:
    NOTE: If you do not see any display on the HyperTerminal, please see the Quick Troubleshoot for Marvell®'s EV-64260A-BP Evaluation Board.

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Data Cache has been enabled...
Instruction Cache has been enabled...
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Version 0.1.23 - Tue Dec 3 18:47:35 2001
Written by : Motorola's RISC Applications, Austin, TX
Released :   January 21th, 1998
Copyright Motorola, Inc. 1993, 1994, 1995, 1996, 1997, 1998
Total Memory size 64 MB.
User memory start address: 0xC0000
DIMM0- size:32MB type:64Mbit (4 devices) (142.85MHz/CL=3) (133.33MHz/CL=2)
DIMM1- size:32MB type:64Mbit (4 devices) (142.85MHz/CL=3) (133.33MHz/CL=2)
SDRAM operation mode: Normal
CAS Latency = 2 RAS Precharge = 2 RAS to CAS = 2
GT Tclock = SysClock = 132.95MHz, CPU Core clock = 399.04MHz
External cache clock=159.61Mhz
Flash memory detected, size: 16384 kb, base address:0x1a000000
Current time and date: 00:39 (hh:mm) 08.01.2002 (dd:mm:yyyy)
DINK32_NITRO >>
```

13. Type "help" then press <Enter> to see the command list.

14. The following are some of the of things that you can do at this point:

    a. You can read from or write to Marvell®'s GT-64260A internal registers. For example:
       Read access: If you want to read the DMA source address register of the GT-64260A. Type "sub 14000810" then press <Enter>. This command will read and display GT-64260A internal register at offset 0x810 in the format of "address : data : ?" as below.
            sub 14000810 <Enter>
            0x14000810 : 0x00000000 : ?

       Write access: Type "sub 14000810" then press <Enter>, then type the data that you want to write to the register then press "Enter" as follow:
            sub 14000810 <Enter>
            0x14000810 : 0x00000000 : ? aa55aa55 <Enter>

b. You can read from or write to EV-64260A-BP's memory as single word or as block.
For example:

Single Word Read Access: If you want to read a single word at offset 0xc0000, type "sub c0000" then press <Enter> as follow:

    sub c0000 <Enter>
    0x000c0000 : 0x0000000 : ?

Single Word Write Access: If you want to write a single word (0xbabeface) at offset 0xc0000, type "sub c0000" then press <Enter> then type "babeface" then press <Enter> as follow:

    sub c0000 <Enter>
    0x000c0000 : 0x00000000 : ? babeface <Enter>

Block Read Access: If you want to read a block of memory from 0xc0000 to 0xd0000, type "dump 0xc0000" then press <Enter> as follow:

    md 0xc0000-d0000 <Enter>

Block Write Access: If you want to write a block of memory from 0xc0000 to 0xd0000 with 0xbaddbeef, type "fill c0000 d0000 baddbeef" then press <Enter> as follow:

    fill c0000 d0000 baddbeef <Enter>

15. For more detail, please refer to EV-64260A-BP user's manual.