RoBoard RB-100/RB-110 Console Redirection How-To

DMP Electronics Inc

Robotic Division

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About RoBoard's Console Redirection Function

- When Console Redirection is enabled, RoBoard will redirect text screens (such as BIOS & DOS screens) to one of its native COM ports.

- By Console Redirection, you are able to manipulate RoBoard (of no VGA card) on any PC with serial (RS232) ports.

    - Note that Console Redirection will become invalid if RoBoard boots into WinXP, Linux, or any protected-mode OS.

Hardware Requirement
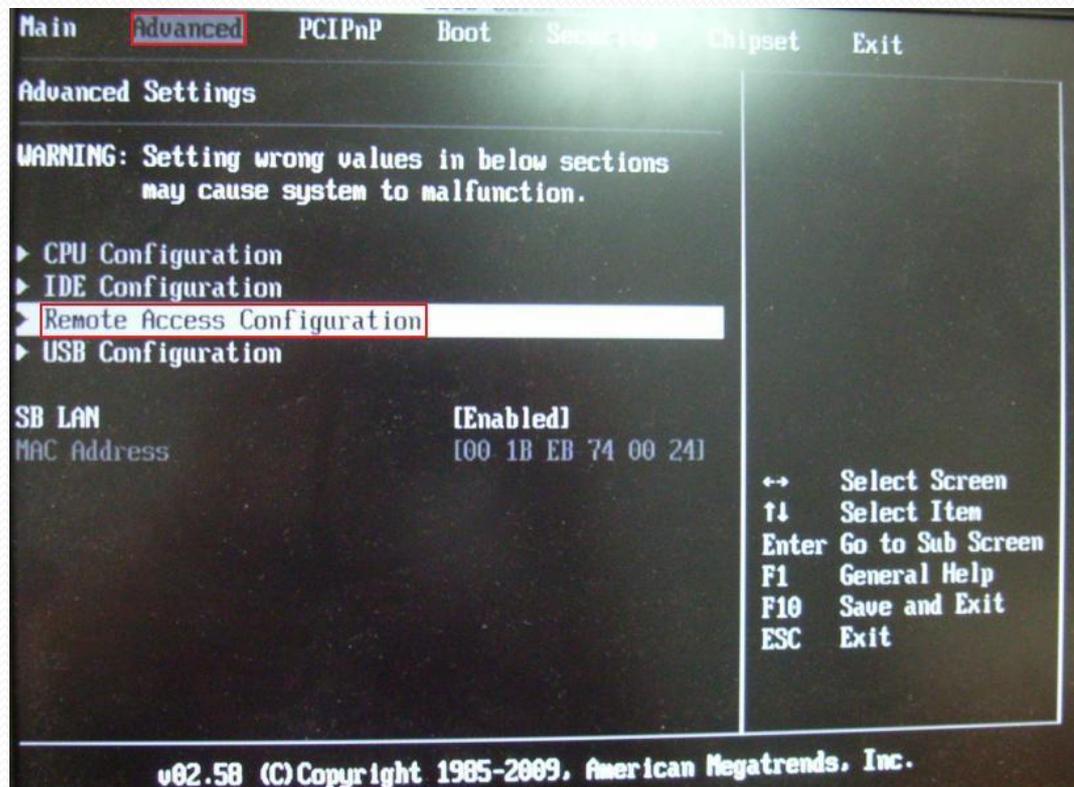
- RoBoard RB-100/RB-110
- Any PC with serial (RS232) ports
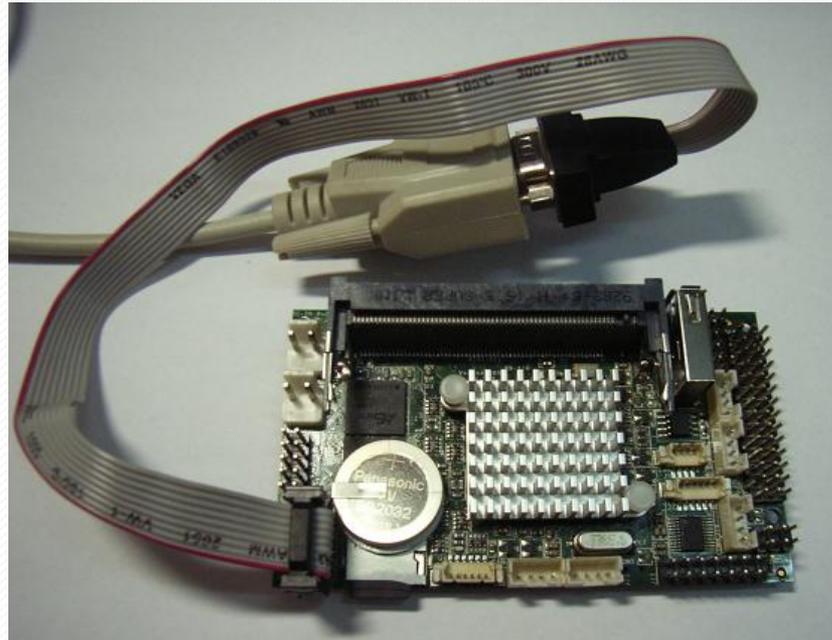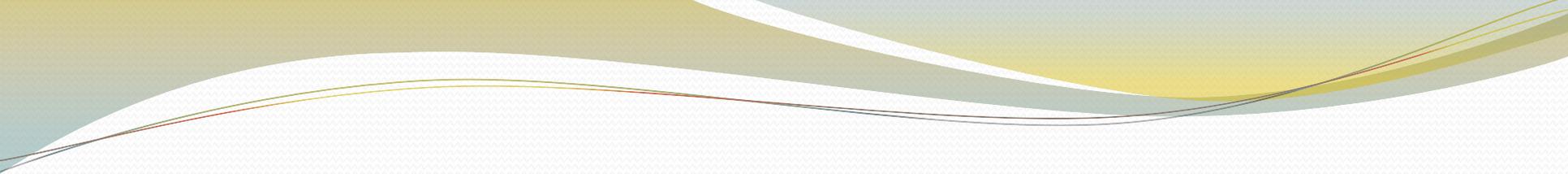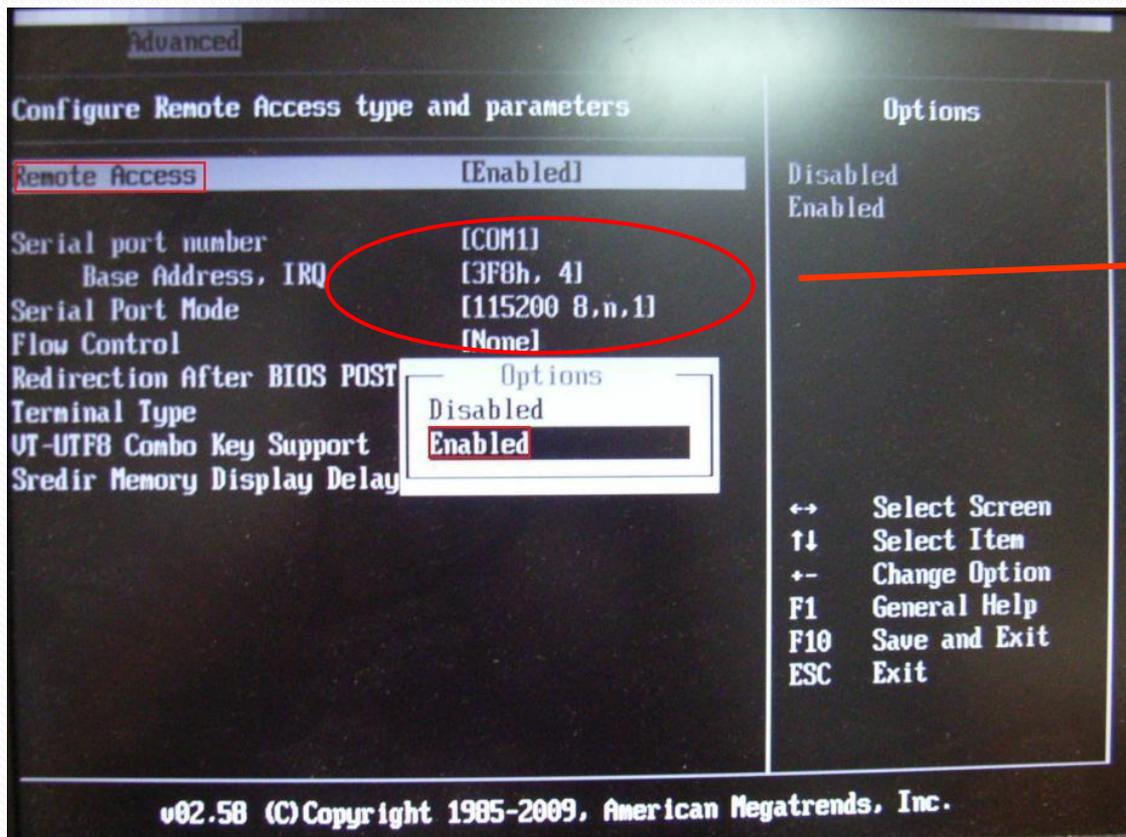
How to Enable RoBoard Console Redirection

Method 1 (by BIOS)

- STEP 1: In BIOS, go to Advanced → Remote Access Configuration
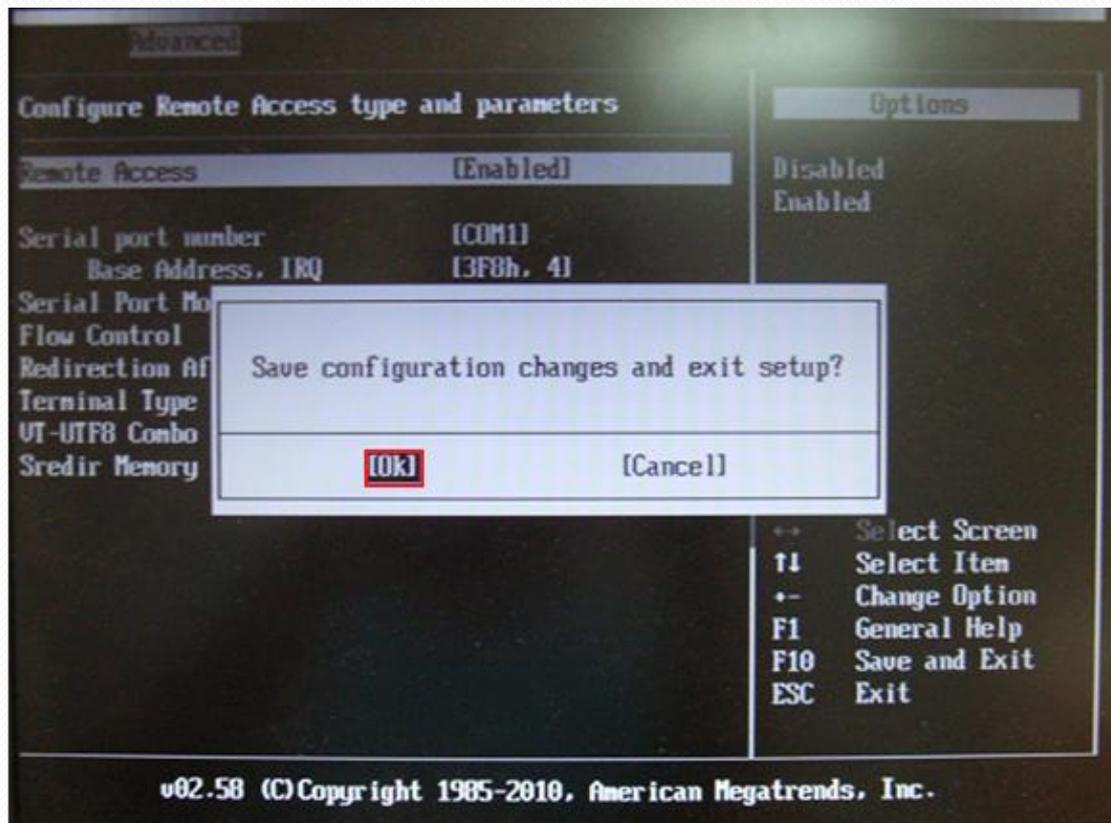
Method 1 (by BIOS)

- STEP 2: Set "Remote Access" as [Enabled]

In this BIOS menu, you can also set the COM port that redirects the console.
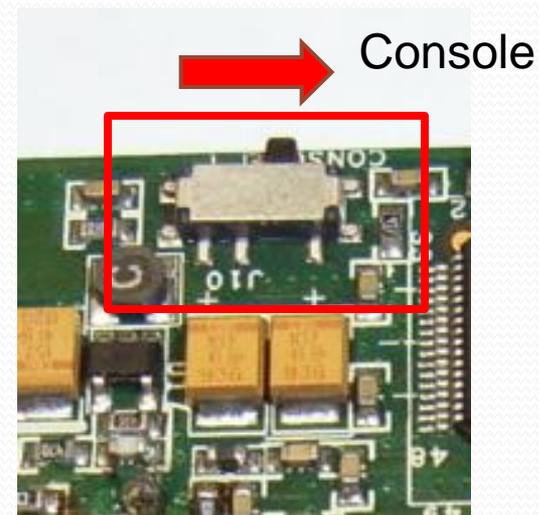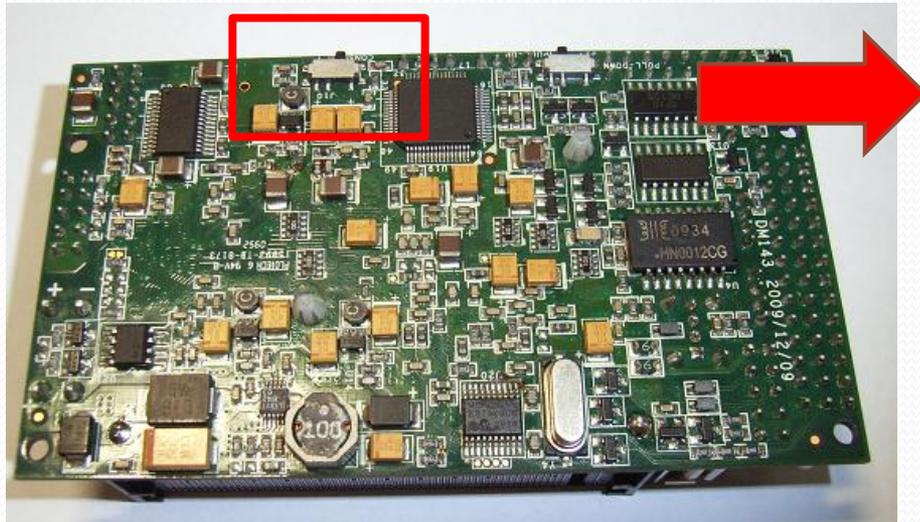
Method 1 (by BIOS)

- STEP 3: Save and exit the BIOS

Method 2 (by H/W switch)

- Just turn Console Redirection switch to "Console Redirection enable" (see also H/W introd. Slide)

Console

Note: The COM port (& baudrate) to redirect the console is set in BIOS (see the previous Method 1 pictures).

Remarks

- Console Redirection Function will occupy the COM port that is set to redirect the console (default COM1 at 115200bps).

- Console Redirection is valid only for Real Mode and the 80×25 text mode.

  - i.e., it doesn't work for any protected-mode OS and any graphic-mode DOS program.

- The Method 2 (H/W switch method) doesn't work on some early RB-100.
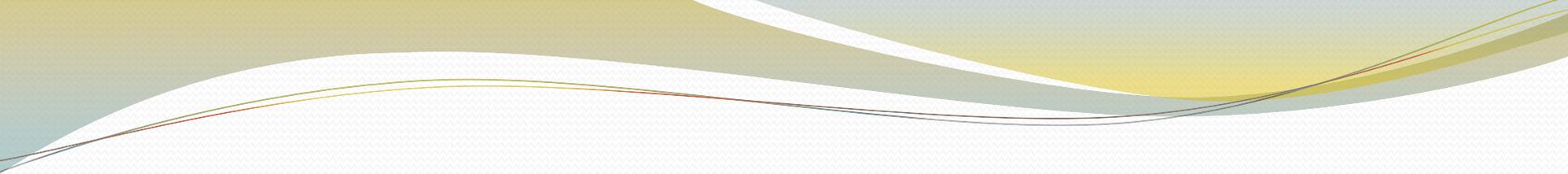
Connect PC to RoBoard via Console Redirection

(Use WinVista & PuTTY as an example)

STEP 1: Download PuTTY

- Download PuTTY from :

    `http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html`

| For Windows on Intel x86				
PuTTY:	putty.exe	(or by FTP)	(RSA sig)	(DSA sig)
PuTTYtel:	puttytel.exe	(or by FTP)	(RSA sig)	(DSA sig)
PSCP:	pscp.exe	(or by FTP)	(RSA sig)	(DSA sig)
PSFTP:	psftp.exe	(or by FTP)	(RSA sig)	(DSA sig)
Plink:	plink.exe	(or by FTP)	(RSA sig)	(DSA sig)
Pageant:	pageant.exe	(or by FTP)	(RSA sig)	(DSA sig)
PuTTYgen:	puttygen.exe	(or by FTP)	(RSA sig)	(DSA sig)

# STEP 2: Configure PuTTY Serial Settings

- STEP 2.1: Launch PuTTY
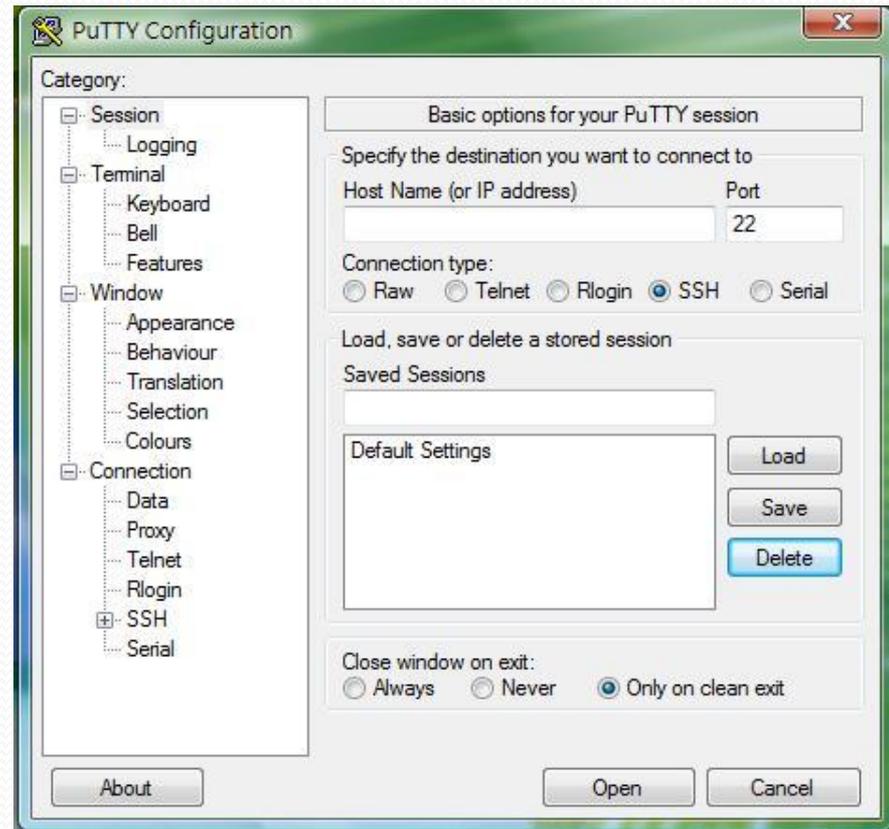
STEP 2: Configure PuTTY Serial Settings

- STEP 2.2: Set the correct serial configuration

  - Select your PC's serial port that will connect to RoBoard (COM5 in this example).

  - The buadrate, data/stop bits, parity, and flow control settings should coincide with RoBoard's console-redirection port.

    - The default settings of RoBoard's console-redirection port are 115200 bps, 8 data bits, 1 stop bit, no parity and no flow control.

STEP 2: Configure PuTTY Serial Settings
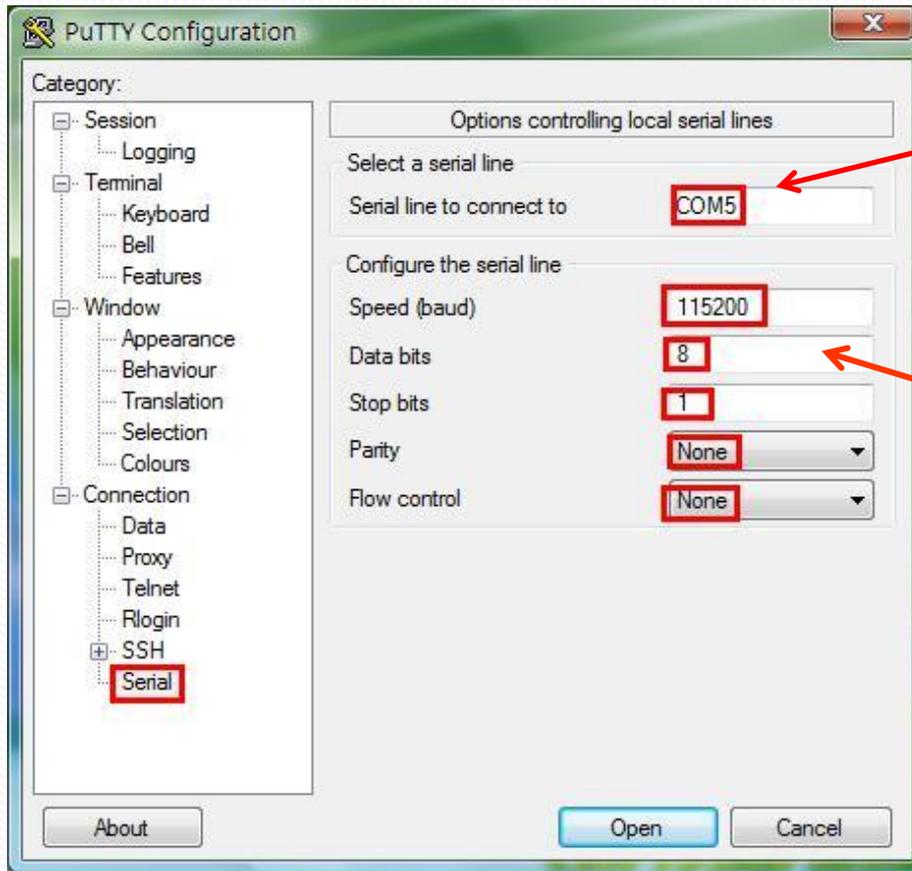
PC's serial port
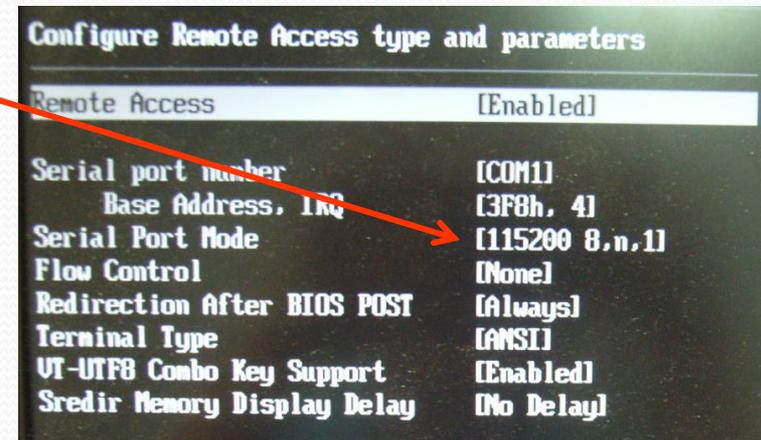
RoBoard BIOS settings

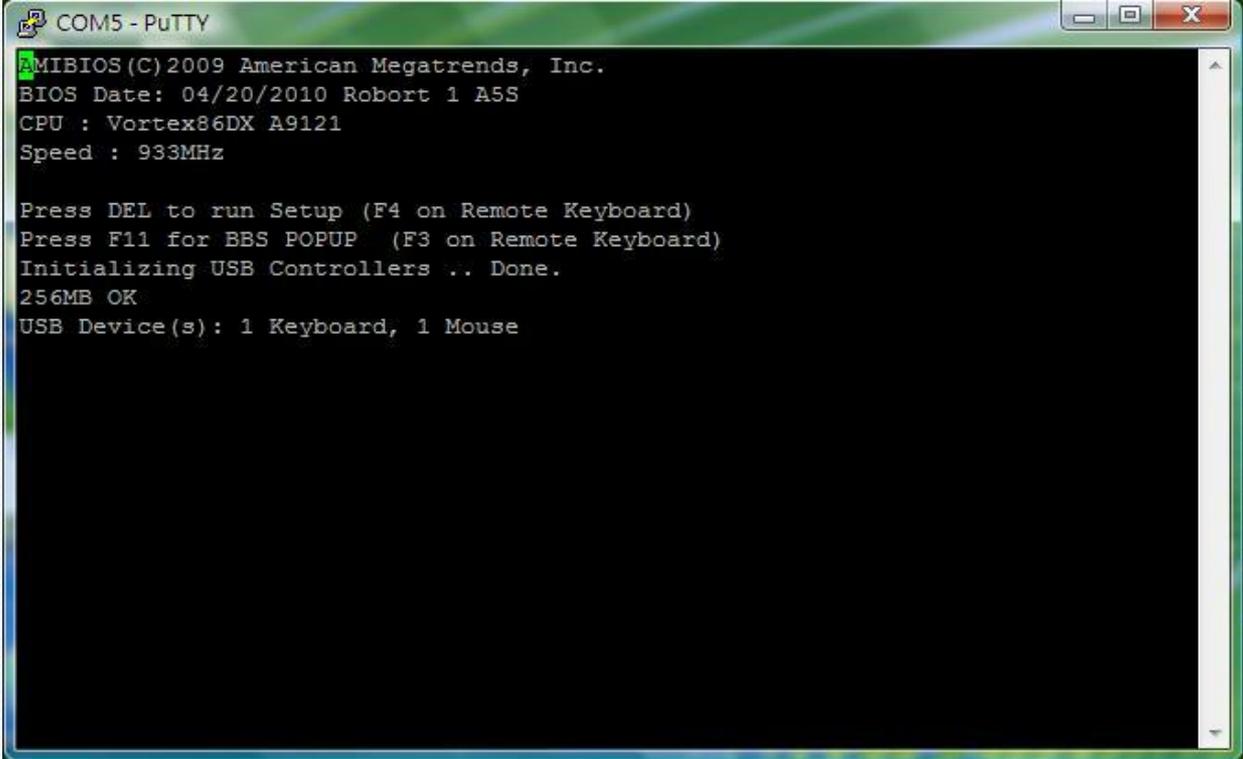# STEP 3: Connect Serial Ports of Your PC and RoBoard
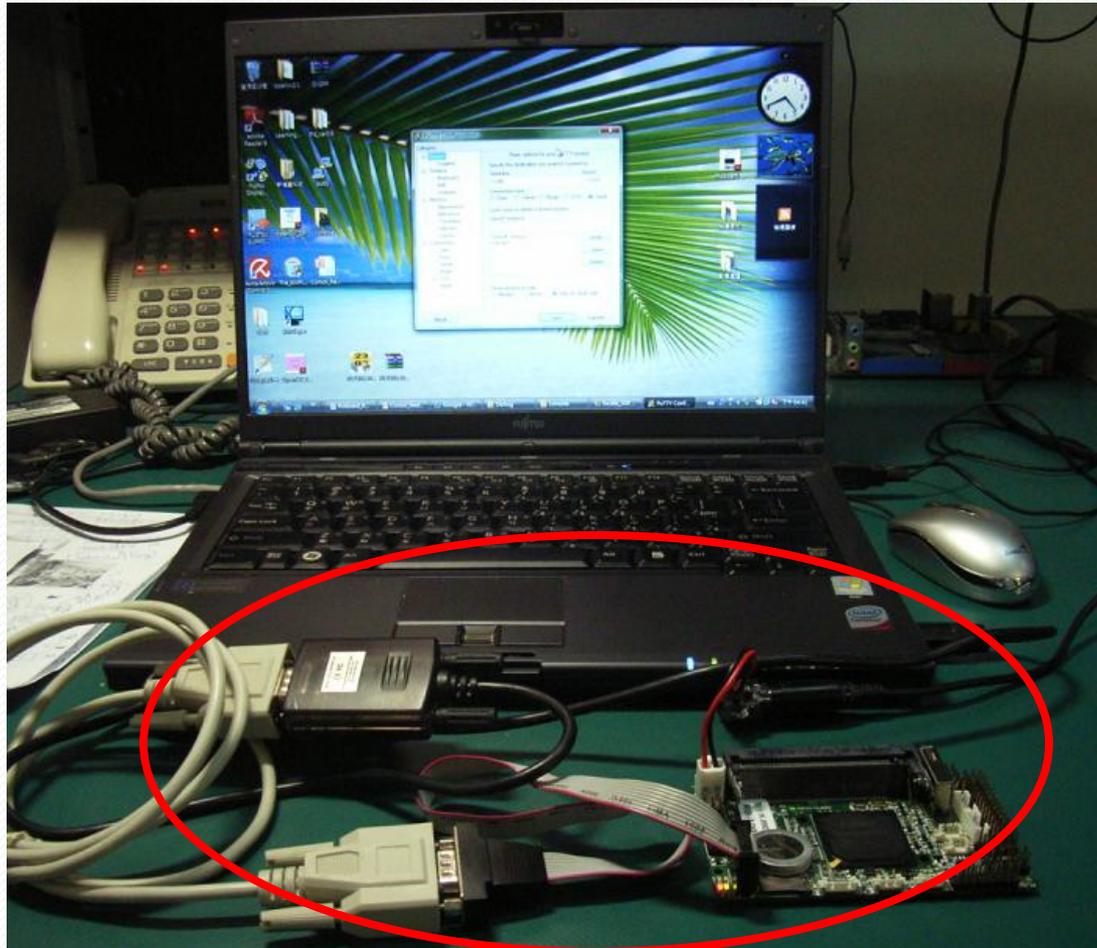
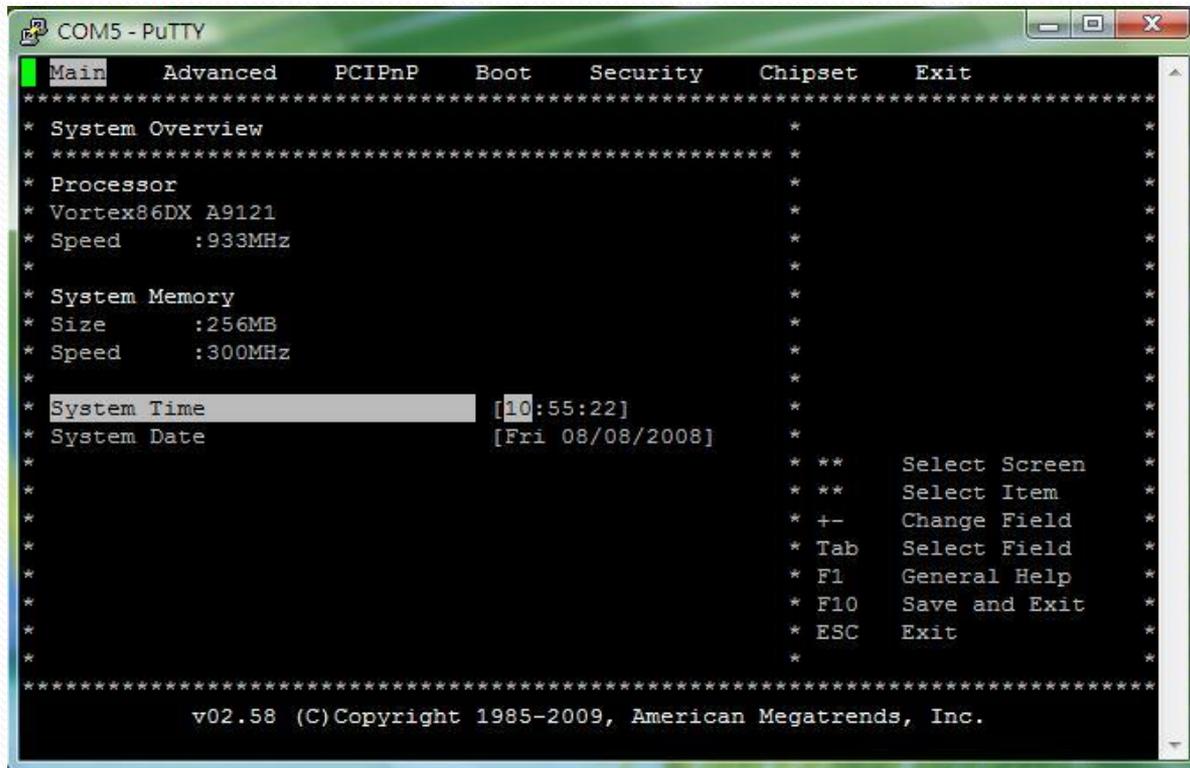# STEP 4: Open PuTTY Serial Connection
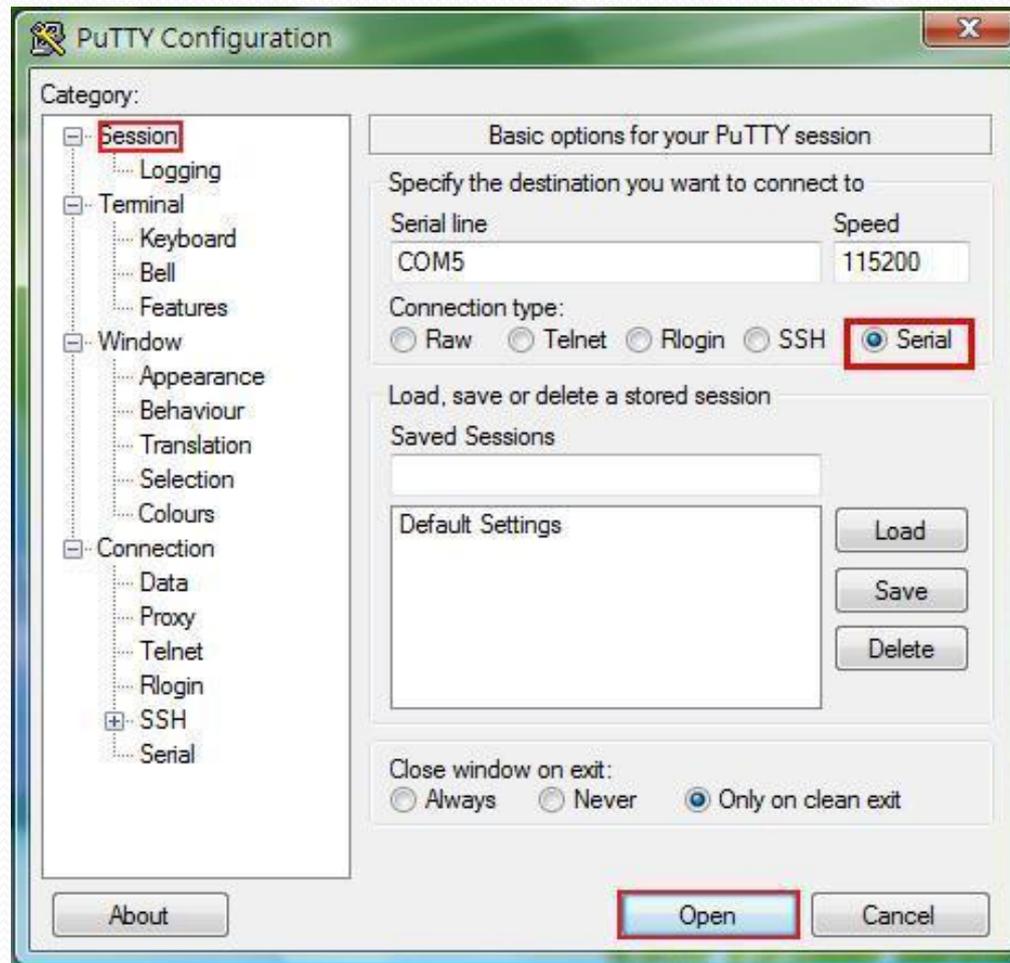
STEP 5: Power on RoBoard

- Power on RoBoard; then you will see the RoBoard boot screen in PuTTY.

STEP 5: Power on RoBoard

- You can then press "F4" key of your PC (in the boot screen) to enter RoBoard BIOS and manipulate it.

STEP 5: Power on RoBoard

- Alternatively, you can press "F3" key of your PC to select RoBoard boot device.

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THANK YOU