APPENDIX I
GUIDELINES TO SETUP AND USE MINICOM

1.1 Installing USB to Rs232 Driver for MCP2200 Converter Chip

The driver for MCP220 USB-to-Serial device are generally preloaded in the Linux Kernel. It might be present either in CDC-Communication Device Class or USB Class depending on whether MCP2200 is based on CDC interface or USB interface. The following steps may be used to install drivers in both the cases. For this study, CDC interface was used.

i. **For CDC class**, one the following command is used to cross check loadable module:

   ```bash
   lsmod | grep cdc    or
   dmesg | grep ttyACM
   ```

ii. **For USB class**, one the following command is used to cross check loadable module:

   ```bash
   lsmod | grep USB    or
   dmesg | grep ttyUSB
   ```

iii. Cross check the `/dev` folder using the following command

   ```bash
   ls /dev/ttyACM* (for CDC class)    or
   ls /dev/ttyUSB* (for USB class)
   ```

   One should be able to locate something like `/dev/ttyACMx` or `/dev/ttyUSBx`.

iv. Map `/ttyACMx (or /ttyUSBx)` to a serial port. To map, the following command is used:

   ```bash
   ln -sf /dev/ttyACMx /dev/ttyS0  or
   ln -sf /dev/ttyUSBx /dev/ttyS0
   ```

   Note: Certain Minicom software versions may allow us to use `ttyACMx` directly while configuring Minicom as mentioned in the next section.
1.2 Setting up Minicom for the First Time

The following steps should be followed for setting up Minicom for the first time.

i. Install Minicom using the following command.

```
sudo apt-get install minicom
```

ii. Start Minicom by executing the following command:

```
sudo minicom -s.
```

After this, follow the following steps.

iii. Select option ‘Serial Port Setup’ from the menu and press ‘Enter’.

![Screenshot of Minicom with Serial Port Setup selected]

iv. A new screen showing current settings will be displayed. Change the values to make settings as shown in the following figure. The settings can be changed by pressing alphabets given on the left. For example, to change the baud rate, press ‘E’ and when the cursor blinks, enter the desired value.

![Screenshot of Minicom showing Serial Port Settings]

v. After making all changes, press ‘Enter’ and following screen will be visible.
vi. Then select ‘Exit’. It will take us to Minicom serial terminal.

1.3 Using Minicom for Accessing Target Machine

i. To open Minicom, use the following command and enter password

```
sudo minicom
```

ii. Certain initialization activities will take place and display version number, port name etc.

iii. Switch on the target board (OpenBoard-AM335x). Minicom will start emulating the board and will display the Linux booting process on target board.

iv. Login with root and we can start using `ls` or any other command to see the files transferred.