

Instructions for using the VMware™ Virtual Machine and its LTIB Contents for i.MX53 Quick Start Board

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Overview

This page contains instructions for setting-up and using the VMware virtual machine (VM) that is provided with the i.MX53 Quick Start Board. This VM has been pre-loaded with Ubuntu Linux. You can run this Ubuntu Linux virtual machine on a PC that has another operating system such as Microsoft Windows™ already installed. It is thus not necessary to install Ubuntu Linux on a PC in order to use the virtual machine.

Also, the software tools used for building and running a Linux kernel on the i.MX53 target hardware have been configured in this virtual machine. These tools use Linux Target Image Builder (LTIB) as their user interface.

Details

Setting Up VMware and Installing the Virtual Machine.

1. Download the free VMware Player from www.vmware.com.
2. Install the VMware Player on your host PC.
3. Run `vm_Ubuntu.exe` file from DVD-ROM. It will create `vm_Ubuntu` directory. That directory contains an Ubuntu virtual computer that can be used with VMware Player.
4. To use the virtual computer, navigate into the new directory and double-click the file ending in `".vmx"`. This will start VMware Player.
 - If VMware Player asks if the virtual computer was "moved" or "copied", please choose "copied". This happens the first time you run the virtual machine, when VMware Player discovers its existence.

Logging In to the Virtual Machine

When the virtual computer is running, you should be automatically logged in. If this does not occur, then log into the virtual machine with the following credentials:

```
username= lucid  
password= lucid
```

The Linux Target Image Builder (LTIB)

The *Linux Target Image Builder* is the configuration-and-build tool that is used to make binaries for the i.MX target systems, including the i.MX53.

The LTIB directory for the i.MX53 Linux BSP is located at:

```
/home/lucid/Desktop/L2.6.35_11.09.01_ER_source
```

To install LTIB, enter on LTIB directory and run install:

```
cd /home/lucid/Desktop/L2.6.35_11.09.01_ER_source  
  
./install
```

Install will ask the folder you want to install LTIB. You can install it e.g. /home/lucid/ltib. From this point on, the LTIB directory will be referred to as "<ltib>" in example command lines.

Running LTIB

Change the current directory to <ltib>.

To build kernel and root file system for i.MX53, use the following command:

```
./ltib -c
```

Additional Virtual Machine Contents

The following packages were added on the i.MX53 Quick Start Board Virtual Machine at Desktop (/home/lucid/Desktop):

File name	Description
L2.6.35_11.09.01_ER_docs.tar.gz	i.MX53 Quick Start Board BSP Documentation
L2.6.35_11.09.01_ER_source	i.MX53 Quick Start Board BSP (unpacked)
patches.tar.gz	Patches to be applied on kernel and u-boot
u-boot.bin	U-boot binary for i.MX53 QSB
ubuntu_start_board.bin.tar.gz	SD Card Ubuntu demo image
gpu-sdk1008.tar.gz	Gpu sdk source code

Using the Pre-Built Image

On /home/lucid/Desktop folder (on VMware image) there is a SD card demo image binary of Ubuntu Lucid for i.MX53. To write the binary image on a SD card, make the following steps:

1 - Unpack the file "ubuntu_start_board.bin.tar.gz" located at /home/lucid/Desktop (Ubuntu VMware image) right clicking on file and selecting "Extract Here".

2 - Insert a 4GB or more SD card on PC.

3 - On a terminal window, use the following command to write the image to SD card:

```
$ sudo dd if=/home/lucid/Desktop/ubuntu_start_board.bin of=/dev/sdb
```

4 - Insert the SD card on i.MX53 Quick Start board. It will boot using VGA connector as display output and Serial UART as debug terminal.

NOTE: The user name and password for i.MX53 Ubuntu Lucid is:

Username: lucid

Password: lucid