

Port Multiplier Support Under Linux SiI 3124 or SiI3132 Addonics SATA Host Controller with SiI3726 Addonics Port Multiplier

Ubuntu 6.06 LTS Server Edition

Check if your system detects the SATA host controller
benringor@ubuntu-server:/usr/src\$ **lspci**

1. Kernel Source

Vanilla-Source: source straight from kernel.org (unpatched)
<http://www.kernel.org/pub/linux/kernel/v2.6/>
Version: linux-2.6.17.4

2. Install the Kernel Source

Download and extract the kernel source.

```
benringor@ubuntu-server:~$ cd /usr/src
benringor@ubuntu-server:/usr/src$ sudo mkdir linux-2.6.17.4
Password:
benringor@ubuntu-server:/usr/src$ sudo wget http://www.kernel.org/pub/linux/kernel/v2.6/linux-2.6.17.4.tar.bz2
benringor@ubuntu-server:/usr/src$ sudo tar xjvf linux-2.6.17.4.tar.bz2
```

3. Download SATA code with Port Multiplier (PMP) support

<http://home-tj.org/wiki/index.php/Libata-tj-stable>

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or

```
benringor@ubuntu-server:/usr/src$ sudo wget http://home-tj.org/files/libata-tj-stable/libata-tj-2.6.17.4-20060710.tar.bz2
```

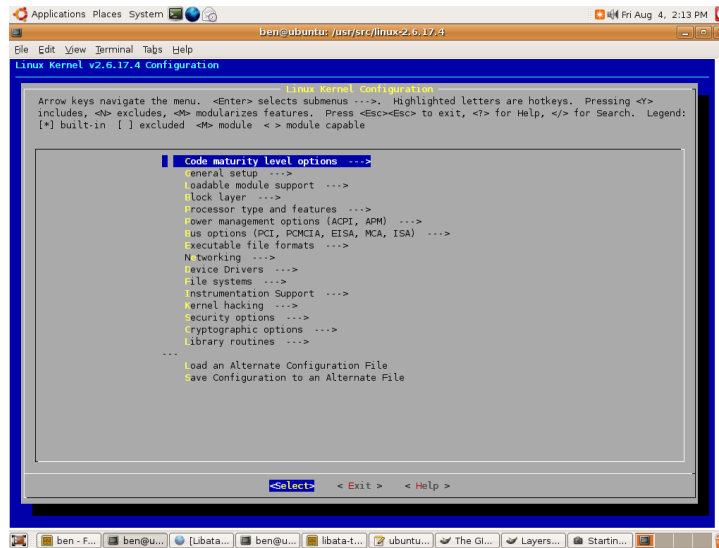
4. Extract & Patch

Once you have downloaded the patch, extract it and apply.

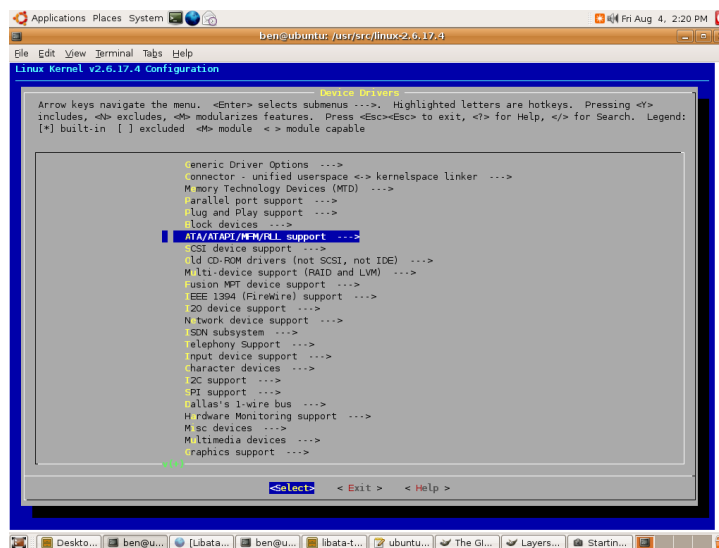
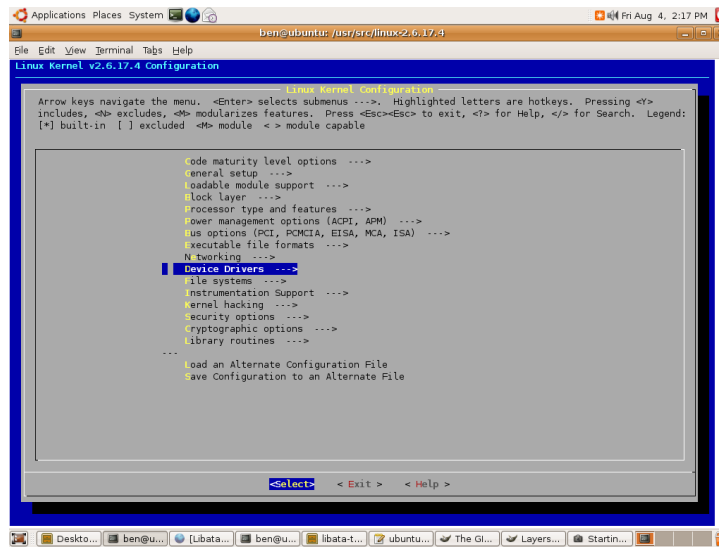
```
benringor@ubuntu-server:/usr/src$ ls
benringor@ubuntu-server:/usr/src$ sudo tar xjvf libata-tj-2.6.17.4-20060710.tar.bz2
Password:
benringor@ubuntu-server:/usr/src$ cd linux-2.6.17.4
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo apt-get install patch
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ patch -p1 < ../libata-tj-2.6.17.4-20060710/combined.patch
```

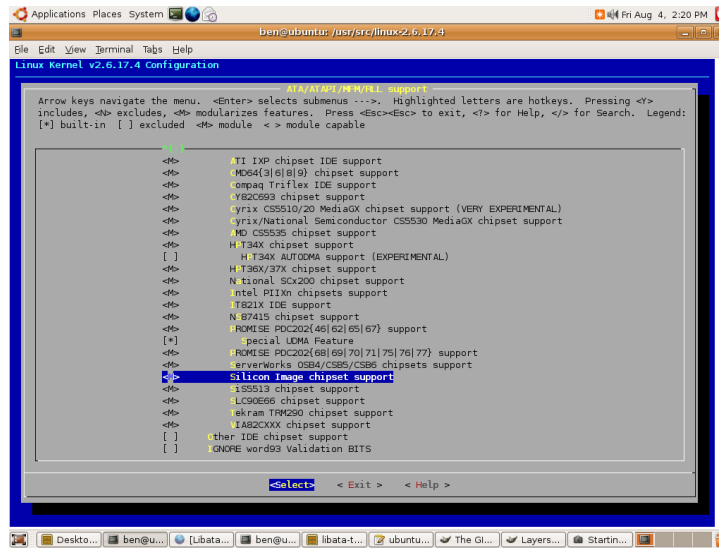
5. Prepare for configuring and compiling kernel

```
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo apt-get update
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo apt-get install build-essential
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo apt-get install kernel-package
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo apt-get install gcc
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo apt-get install libncurses5
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo apt-get install libncurses5-dev
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo apt-get install libqt3-mt-dev
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo apt-get install ubuntu-desktop
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo reboot
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo make menuconfig
```

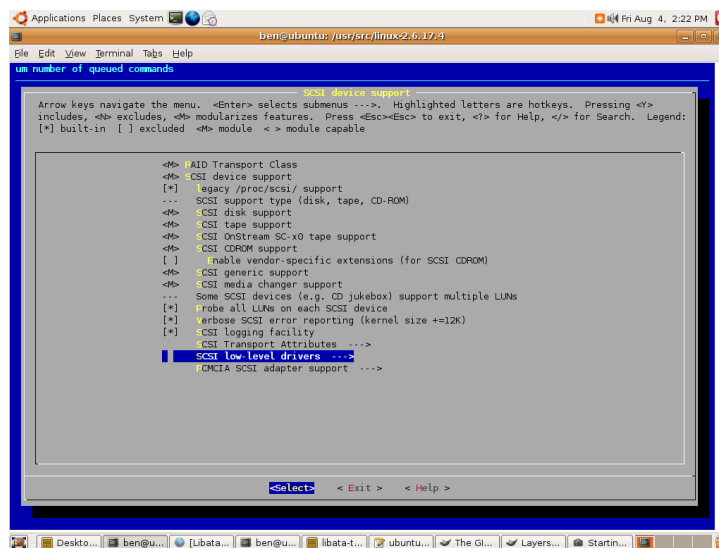
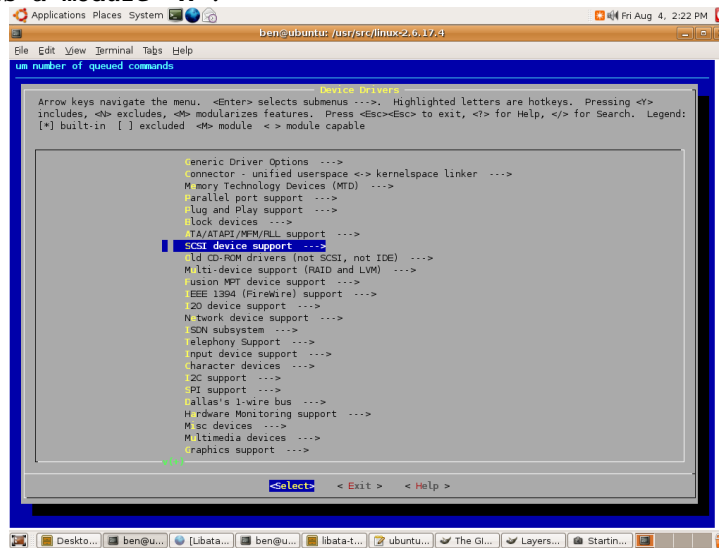


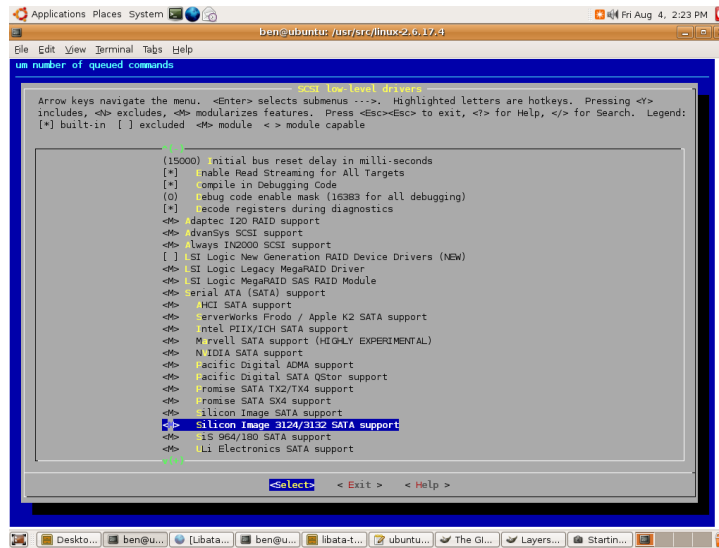
Under Device Drivers > ATA/ATAPI/MFM/RLL support, check if Silicon Image chipset support is a module <M>.



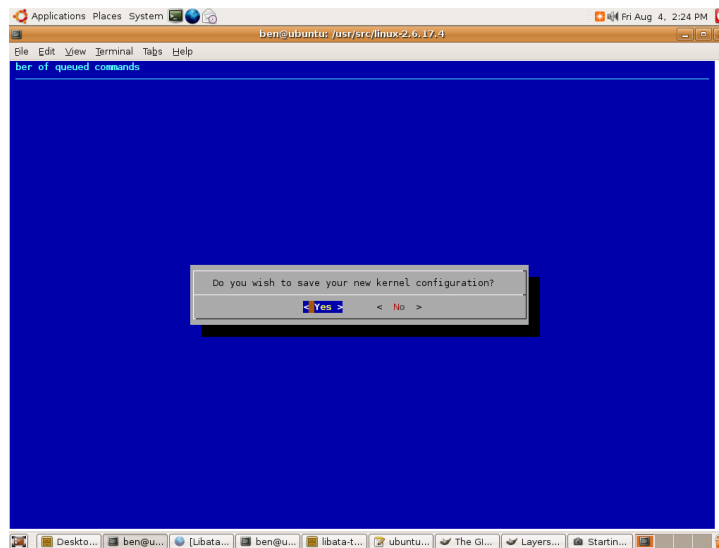


Under Device Drivers > SCSI device support > SCSI low-level drivers, check if Silicon Image 3124/3132 SATA support is a module <M>.





Save changes.



```
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo make-kpkg clean
```

6. Build Kernel and Modules

```
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ sudo make-kpkg --initrd --append-to-version=-server kernel_image kernel_headers
```

7. Installing the Kernel

```
benringor@ubuntu-server:/usr/src/linux-2.6.17.4$ cd /usr/src
```

```
benringor@ubuntu-server:/usr/src$ ls
```

```
benringor@ubuntu-server:/usr/src$ sudo dpkg -i kernel-image-2.6.17.4-server_10.00.Custom_i386.deb
```

```
benringor@ubuntu-server:/usr/src$ sudo dpkg -i kernel-headers-2.6.17.4-server_10.00.Custom_i386.deb
```

8. Verify Addition of HDD connected to Port Multiplier

```
benringor@ubuntu-server:~$ uname -r
```

```
benringor@ubuntu-server:~$ cat /proc/partitions
```

NOTE: PATCHES CONTAINED IN THIS ARCHIVE SHOULD BE CONSIDERED EXPERIMENTAL AND MAY CAUSE MASSIVE DATA LOSS. YOU'VE BEEN WARNED. DON'T USE THIS ON CRITICAL PRODUCTION SYSTEMS.