

# SETUP COM3 & COM4 OF ROBOARD RB-100/RB-110 IN UBUNTU

DMP Electronics Inc

Robotic Division

Aug 2010

# STEP1.

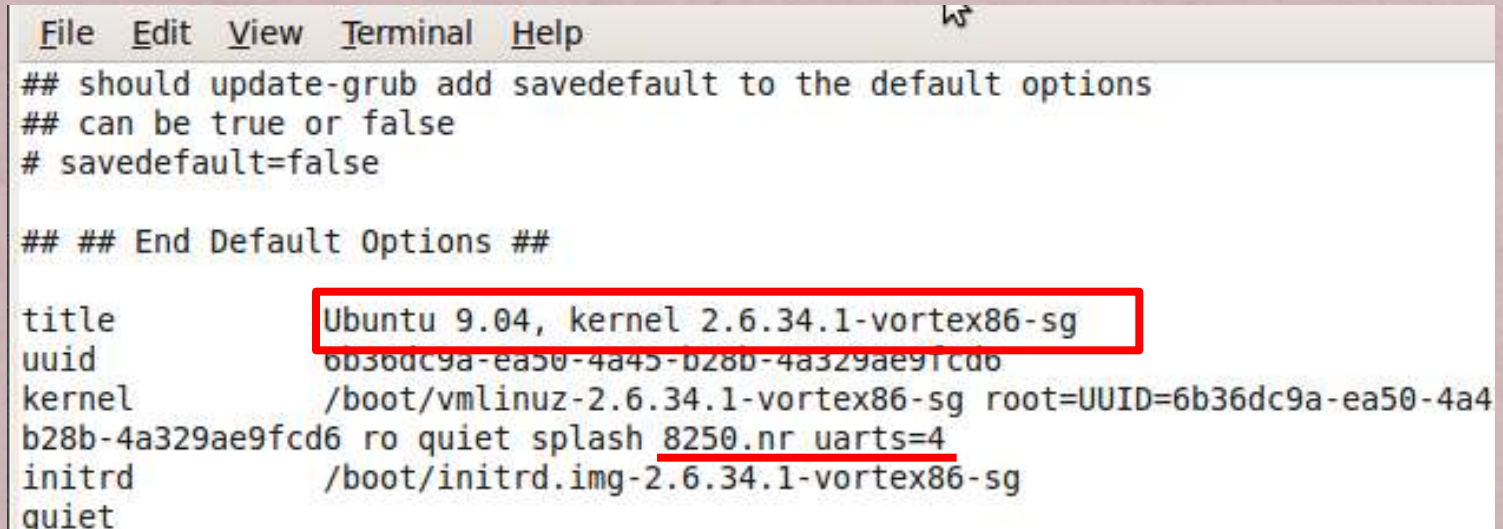
- + Open a Terminal window
- + Type `vi /boot/grub/menu.lst`

```
a@a-laptop: ~  
File Edit View Terminal Help  
a@a-laptop:~$ dmesg|grep tty  
[ 4.489392] serial8250: ttyS0 at I/O 0x3f8 (irq = 4) is a 16550A  
[ 4.490524] serial8250: ttyS1 at I/O 0x2f8 (irq = 3) is a 16550A  
a@a-laptop:~$ vi /boot/grub/menu.lst
```

```
File Edit View Terminal Help  
# menu.lst - See: grub(8), info grub, update-grub(8)  
# grub-install(8), grub-floppy(8),  
# grub-md5-crypt, /usr/share/doc/grub  
# and /usr/share/doc/grub-doc/.  
  
## default num  
# Set the default entry to the entry number NUM. Numbering starts from 0, and  
# the entry number 0 is the default if the command is not used.  
#  
# You can specify 'saved' instead of a number. In this case, the default entry  
# is the entry saved with the command 'savedefault'.  
# WARNING: If you are using dmraid do not use 'savedefault' or your  
# array will desync and will not let you boot your system.  
default 0  
  
## timeout sec  
# Set a timeout, in SEC seconds, before automatically booting the default entry  
# (normally the first entry defined).  
timeout 3  
  
## hiddenmenu  
# Hides the menu by default (press ESC to see the menu)  
hiddenmenu
```

## STEP2.

- + Find `kernel 2.6.34.1-vortex86-sg` in the `menu.lst`
- + Add `8250.nr_uarts=4`



```
File Edit View Terminal Help
## should update-grub add savedefault to the default options
## can be true or false
# savedefault=false

## ## End Default Options ##

title          Ubuntu 9.04, kernel 2.6.34.1-vortex86-sg
uuid           6b36dc9a-ea50-4a45-b28b-4a329ae9fcd6
kernel         /boot/vmlinuz-2.6.34.1-vortex86-sg root=UUID=6b36dc9a-ea50-4a4
b28b-4a329ae9fcd6 ro quiet splash 8250.nr_uarts=4
initrd         /boot/initrd.img-2.6.34.1-vortex86-sg
quiet
```

- + Save & exit vi

## STEP3.

- + Type **sudo -i**
- + Type **reboot**

```
a@a-laptop:~$ vi /boot/grub/menu.lst  
a@a-laptop:~$ sudo -i  
[sudo] password for a:  
root@a-laptop:~# reboot
```



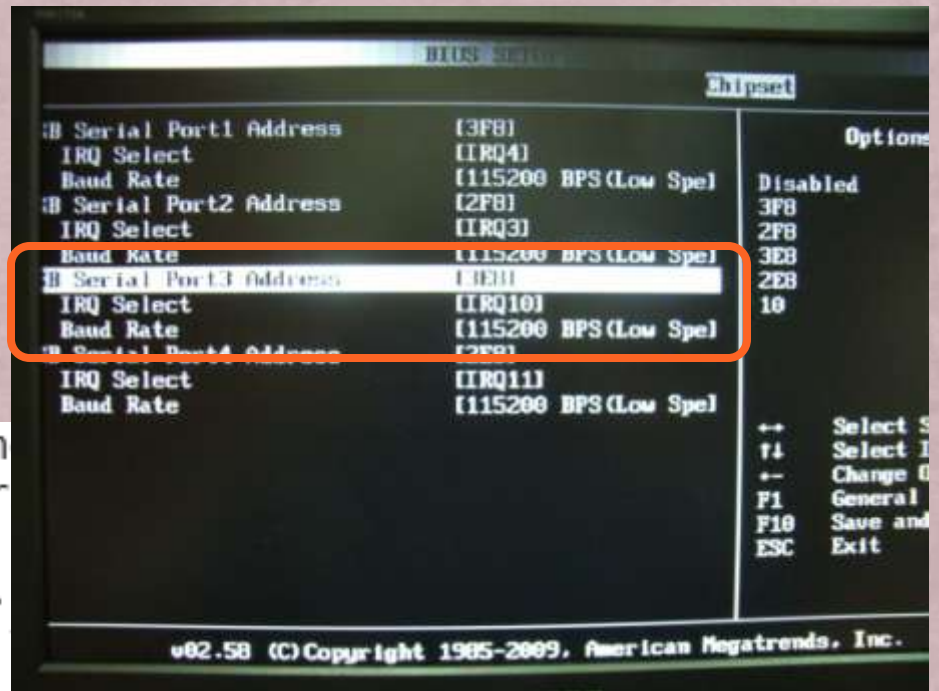
# STEP4.

- + After the RoBoard reboots, open a Terminal window again
- + Type **sudo -i**
- + Type **apt-get install setserial**
  - Note: ensure that the network is connected

```
File Edit View Terminal Help
a@a-laptop:~$ sudo -i
[sudo] password for a:
root@a-laptop:~# apt-get install setserial
```

# STEP 5.

- + Type `setserial /dev/ttyS2 irq 10 port 0x03e8 uart 16550A`
  - Note the irq number and base address should match the RoBoard BIOS COM3 setting



```
(Reading database ... 89311 files an
Unpacking setserial (from .../setser
Processing triggers for man-db ...
Setting up setserial (2.17-44.2) ...
removing the old setserial entry in
Update complete.
```

```
root@a-laptop:~# setserial /dev/ttyS2 irq 10 port 0x03e8 uart 16550A
```

# STEP 6.

- + Type `setserial /dev/ttyS3 irq 11 port 0x02e8 uart 16550A`
  - Note the irq number and base address should match the RoBoard BIOS COM4 setting



```
(Reading database ... 89311 files and directories  
Unpacking setserial (from .../setserial-2.17-44.2.rpm)  
Processing triggers for man-db ...  
Setting up setserial (2.17-44.2) ...  
removing the old setserial entry in /etc/passwd  
Update complete.
```

```
root@a-laptop:~# setserial /dev/ttyS2 irq 10 port 0x03e8 uart 16550A
```

```
root@a-laptop:~# setserial /dev/ttyS3 irq 11 port 0x02e8 uart 16550A
```

## STEP7.

- + You can then type `setserial -g /dev/ttyS*` to see all serial ports
  - Now you should see the COM3 & COM4 are showed in Ubuntu

```
root@a-laptop:~# setserial /dev/ttyS2 irq 10 port 0x03e8 uart 16550A
root@a-laptop:~# setserial /dev/ttyS3 irq 11 port 0x02e8 uart 16550A
root@a-laptop:~# setserial -g /dev/ttyS*
/dev/ttyS0, UART: 16550A, Port: 0x03f8, IRQ: 4
/dev/ttyS1, UART: 16550A, Port: 0x02f8, IRQ: 3
/dev/ttyS2, UART: 16550A, Port: 0x03e8, IRQ: 10
/dev/ttyS3, UART: 16550A, Port: 0x02e8, IRQ: 11
root@a-laptop:~# █
```



# THANK YOU

[tech@roboard.com](mailto:tech@roboard.com)  
<http://www.roboard.com>