

Using Lava Serial Cards with Linux 28 July 2000: Rev A00

The following note specifically describes configuring Redhat Linux 6.2 to operate Lava serial cards, although other versions of Linux will be generically similar.

Lava serial cards work with version 2.15 or later of **setserial**, regardless of Linux version. Redhat Linux 6.2 supplies version 2.15 of **setserial**. If your version of **setserial** is earlier, download the latest version of **setserial** from any Linux file site on the Internet.

Unarchive the **setserial** archive and copy the **rc.serial** file that comes in the **setserial** archive into the **/etc/** directory. The **readme.txt** that comes in the archive supplies details about the **setserial** package beyond those in this note.

The command **setserial -g /dev/ttyS*** shows what serial interfaces are existing on the system as configured. By default, four serial interfaces are set up in the **/dev/** directory and are named **ttyS0**, **ttyS1**, **ttyS2**, **ttyS3**.

To add additional serial interfaces use the following commands (omitting the brackets around the port number parameter):

```
mknod -m 666 /dev/ttyS(x) c 4 64 (where x is the port number)  
cd /dev  
./MAKEDEV ttyS(x)
```

In the Redhat 6.2 installation of Linux, the serial ports' configurations can be found in **/etc/serial.conf**. Other installations may differ in the filename or file location where serial port configuration information is stored.

ISA serial card installation

If you have an ISA card, use one of the commands below (omitting the brackets around the parameters):

```
setserial /dev/ttyS(x) port 0x(yyyy) irq (z) uart 16650V2  
or  
setserial /dev/ttyS(x) port 0x(yyyy) irq (z) uart 16550A
```

In these examples, *x* is the port number, *yyyy* is the I/O address in hex that your card's jumpers are set to, *z* is the interrupt you jumpered the card for, and *16550A* or *16650V2* denotes the type of UART on the serial card.

The following examples apply to any Lava ISA serial card:

```
setserial /dev/ttyS2 port 0x02f8 irq 10 uart 16550A for Com 3  
setserial /dev/ttyS3 port 0x02f8 irq 11 uart 16550A for Com 4
```

PCI serial card installation

If you have a PCI serial card, the **lspci -v** command will report what resources the serial card is using. Use this command to get the IO and IRQ resources of the PCI serial card you are installing as they will become configuration parameters.

If you have a PCI card, use one of the commands below (omitting the brackets around the parameters):

```
setserial /dev/ttyS(x) port 0x(yyyy) irq (z) uart 16650V2
```

or

```
setserial /dev/ttyS(x) port 0x(yyyy) irq (z) uart 16550A
```

In these examples, *x* is the port number, *yyyy* is the I/O address in hex revealed by the **lspci -v** command, *z* is the interrupt revealed by the **lspci -v** command, and *16550A* or *16650V2* denotes the type of UART on the serial card.

The following examples apply to any Lava PCI serial card, despite the use of the “**^fourport**” parameter:

```
setserial /dev/ttyS4 port 0x6100 irq 12 uart 16650V2^fourport for Com 5
```

```
setserial /dev/ttyS5 port 0x6200 irq 12 uart 16650V2^fourport for Com 6
```