



LAVA COMPUTER MFG. INC.

2 VULCAN STREET, TORONTO, ONTARIO M9W 1L2
TEL: (416) 674-5942 FAX: (416) 674-8262
www.lavalink.com

TECHNICAL SUPPORT FAQ

TOPIC:	Linux Installation	PRODUCT(s):	Octopus-550
		REVISION:	A02

Fedora 4,5/udev users:

When udev is used, the mknod command will not properly create a ttyS device that will function or survive a reboot. udev by default only has ttyS0-ttyS3, so if you require more ttyS's you will have to recompile the kernel with the number of ttyS ports you require. This is done in "make menuconfig" at the following menu path:

Device Drivers -> Character Devices -> Serial Drivers -> Number of 8250/16550 Serial Ports to Register at Runtime

By default this is 4 (ttyS0-ttyS3). Change it to a number equal to or greater than the ports you require in the system and compile the kernel. After rebooting, you will have the number of ttyS's you specified and then can continue with the instructions below for configuring using the setserial command.

Installation

On install during the bootup process, the Linux hardware discovery utility detects the Octopus-550 and installs it as ttyS4 ,ttyS5, ttyS6, ttyS7, ttyS8, ttyS9, ttyS10, and ttyS11. These settings will change depending on how many serial ports you have and how they are configured.

However, on installation the card will be configured incorrectly. To configure the card correctly, first find out the port information (I/O range and IRQ) for each serial port. To retrieve that information type at the command line:

```
lspci -v
```

You will then see two separate entries for a "Serial Controller: Lava Computer MFG". Below each entry will be a IRQ number and four I/O ports. Write down that information for all ports (for example, IRQ 12, a400, a800, ac00, b000 IRQ 12, b400, b800, bc00, c000).

Then edit the file:

```
/etc/rc.d/rc.local
```

Add the following lines at the end of the file:

```
setserial /dev/ttyS4 port 0xa400 irq 12 uart 16550a baud_base 115200 ^fourport
setserial /dev/ttyS5 port 0xa800 irq 12 uart 16550a baud_base 115200 ^fourport
setserial /dev/ttyS6 port 0xac00 irq 12 uart 16550a baud_base 115200 ^fourport
setserial /dev/ttyS7 port 0xb000 irq 12 uart 16550a baud_base 115200 ^fourport
setserial /dev/ttyS8 port 0xb400 irq 12 uart 16550a baud_base 115200 ^fourport
setserial /dev/ttyS9 port 0xb800 irq 12 uart 16550a baud_base 115200 ^fourport
setserial /dev/ttyS10 port 0xbc00 irq 12 uart 16550a baud_base 115200 ^fourport
setserial /dev/ttyS11 port 0xc000 irq 12 uart 16550a baud_base 115200 ^fourport
```

The example above uses the information gained from the lspci -v command. The details of your information may be different. Be sure to save the added changes. On reboot all of the ports should be operational.

[Test OS: Redhat 7.3 and 8.0]