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TECHNICAL SUPPORT FAQ

TOPIC:	Linux Installation	PRODUCT(s):	RS422-550
		REVISION:	A01

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 ttySx'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, Linux detects the RS422-550 and sets the configuration for ttyS2 and ttyS3. To verify proper installation you must remember the I/O range (see table below) and IRQ each serial port was jumpered to.

```
ttyS0 = 0x03f8; irq = 4  
ttyS1 = 0x02f8; irq = 3  
ttyS2 = 0x03e8; irq = 4  
ttyS3 = 0x02e8; irq = 3
```

First you must verify that the card was installed correctly. To do this at the command line type:

```
setserial -a /dev/ttyS2
```

Note: ttyS2 refers to Com3. This setting may change depending on how the jumpers are configured on the card.

If the card is correctly configured in Linux you will see the following information:

```
/dev/tty2, Line 2, UART 16550A, Port: 0x03e8, IRQ: 4  
Baud_base: 115200, close_delay: 256, divisor: 0  
closing_wait: 15360  
Flags: spd_normal skip_test
```

Your port and IRQ should conform to the jumper settings on the card.

If you find that the information displayed does not match the above (port and IRQ should match your jumper settings), then carry on to the next step below. If the data is correct then the installation is complete.

To set the serial port to the correct settings, edit the file:

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

Add the following lines at the end of the file:

```
setserial /dev/ttyS2 port 0x03e8 irq 4 uart 16550a baud_base 115200 ^fourport  
setserial /dev/ttyS3 port 0x02e8 irq 3 uart 16550a baud_base 115200 ^fourport
```

Your port/IRQ may be different depending on the jumper settings on the card. Be sure to save the added changes. On reboot all of the ports should be operational.

[Test OS: Redhat 7.3 and 8.0]