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TECHNICAL SUPPORT FAQ

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|--------|--------------------|-------------|-------------------|
| TOPIC: | QNX 6 Installation | PRODUCT(s): | SSerial-550 (ISA) |
| | | REVISION: | A00 |

Installation

- Before installing the card into the system you must check for available resources. To get a general idea of the IRQ and COM port addresses in use you will have to check several different locations:
 - Existing COM port addresses and IRQs can be found by executing the command `"sin ar | grep devc-ser8250"` which returns the arguments of process devc-ser8250 (eg. `devc-ser8250 -u1 3F8,3 -u2 2F8,4` - which tells us that IRQs 3 and 4 are in use as are IO addresses 3F8 and 2F8.)
 - In addition certain IRQs may be reserved by the PCI system bus. Executing the command `"pci -v | grep Interrupt"` will return a list of all the interrupt line values.
- Set the jumpers on the card to any IRQ and COM port addresses NOT found in the previous step.
NOTE: The SSerial-550 is shipped with factory default jumper settings of COM1 and IRQ 4.
- With the power turned off, insert the SSerial-550 card into any free ISA slot in your PC. Make sure the card is well seated. Turn your PC on and start QNX 6.
- If jumpered correctly QNX will automatically detect the presence of the SSerial-550 card and create a device in the folder `/etc/dev/` called Ser[x] (where x will be the first available COM port while enumerating at boot-up).
- To verify that the card has been installed you may check in either the `/etc/dev/` folder, or in QNX's System Information (Launch>Utilities>System Information). Within the System Information listing you will find a process named "devc-ser8250". By selecting this process you will have access to several different information tabs. Selecting the Arguments tab (Args) will provide you with the exact arguments that were passed to the devc-ser8250 process at boot-up. From here you can easily determine which port is assigned to which serial device by referring to the card's resources.
For example, given the process command `"devc-ser8250 -u1 3F8,3 -u2 2F8,4 -u3 a000,5"` we can see that Com1 and Com2 were mapped to devices Ser1 and Ser2 respectively and our serial port at a000 was mapped to device Ser3.

Testing

Testing the card's functionality can be done by using QNX's own terminal program, Qtalk, and a loopback connector. To test a port, attach the loopback connector and open up a Qtalk session by executing the command `"qtalk -m /dev/ser3 -b 115200,8,n,1"` on the port. While the loopback connector is attached any characters entered in Qtalk should be echoed back to the screen. Removing the loopback connector should prevent character echoing from occurring.

Troubleshooting

If for some reason the card was not picked up by QNX at boot-up you can manually add the port by using the devc-ser8250 command.

Example: Say we have a serial port residing at physical address=3e8 and IRQ=5 which wasn't allocated a serial device in the `/etc/dev/` folder. If we have determined that Ser1 and Ser2 already exist in the `/etc/dev/` folder (this is done by inspecting the folder `/etc/dev/` for all serial devices), we can add a new serial device by running the command:

```
devc-ser8250 -u3 3e8,5
```

This is a very simple example of adding a new serial device using the devc-ser8250 command. Full documentation of all the options associated with this command can be found in the QNX 6 RTOS Utilities Reference Manual.