

This document describes the installation and configuration of Linux drivers to use the serial ports of the Beetle/iClick.

The serial ports of the "I/O Hub Interface Cards" are provided by a board named "USB to 4x RS232 Converter MOS". A kernel module is needed to use these ports.

The modules are part of the Wincor Nixdorf Linux POS (WNLPOS) Pre-Installation. This package is only needed if another Linux distribution is used.

## Table of contents

Table of contents.....	1
Contents of DOWNLOAD.ZIP: .....	1
1. Build kernel modules .....	1
2. Configure your system.....	2
Load module.....	2
Used nodes .....	2
Automatic configuration .....	2

## Contents of DOWNLOAD.ZIP:

**Read this document before using any of this software!**

### Driver version 1.0.0.8\_POS\_2

Linux_7840_V1.0.0.8_POS_2.tar.gz	Kernel module source code
README.PDF	This document

## 1. Build kernel modules

The module mos7840.ko must be build from the sources. The kernel sources are needed to install the modules on the system. Run "uname -r" to find out your kernel version and go to [www.kernel.org](http://www.kernel.org) to get your kernel sources.

Execute the following commands to build the module:

```
tar xzf Linux_7840_V1.0.0.8_POS_2.tar.gz
```

```
cd Linux_7840_V1.0.0.8_POS_2/
```

```
make
```

## 2. Configure your system

### *Load module*

To load the module manually, run “`insmod mos7840.ko`”.

### *Used nodes*

For each serial port detected by the driver a node `/dev/ttyUSBx` is created:

```
crw-rw---- 1 root uucp 188, 0 10. Feb 14:34 /dev/ttyUSB0
crw-rw---- 1 root uucp 188, 1 10. Feb 14:34 /dev/ttyUSB1
crw-rw---- 1 root uucp 188, 2 10. Feb 14:34 /dev/ttyUSB2
crw-rw---- 1 root uucp 188, 3 10. Feb 14:34 /dev/ttyUSB3
...
```

These nodes can be used to access the serial ports.

The standard nodes `/dev/ttySx` can also be created. The following commands can be used to create the node for COM5. They must be called for all other serial ports with slight differences.

```
rm -f /dev/ttyS4
mknod --mode=660 /dev/ttyS4 c 188 0
chown root:uucp /dev/ttyS4
```

### *Automatic configuration*

The commands above should be include to a standard script started on every boot.