

NAME

uhso - support for several HSxPA devices from Option N.V.

SYNOPSIS

The module can be loaded at boot time by placing the following line in loader.conf(5):

```
uhso_load="YES"
```

DESCRIPTION

The **uhso** driver provides support for several HSxPA devices from Option N.V. that are based on their packet interface. Each device has a set of serial ports and a raw IP packet interface. The serial ports of the device are accessed through the ucom(4) driver which makes them behave like tty(4) devices. The packet interface is exposed as a network interface.

Establishing a connection on the packet interface is achieved by using the proprietary AT commands "AT_OWANCALL" and "AT_OWANDATA" on any of the available serial ports.

The network interface must be configured manually using the data obtain from these calls.

Each device usually have at least two or more serial ports, their individual purpose can be identified through sysctl(8). Ports identified as "Modem" features a normal modem interface that can be used with PPP. Ports identified as "Diagnostic" uses a proprietary binary interface used for firmware upgrades, this port does not have a AT command interface and can not be used to control the device. Other ports features an AT command interface that can be used for normal device control.

HARDWARE

The **uhso** driver should work with most devices from Option. The following devices have been verified to work

- Option GlobeSurfer iCON 7.2 (new firmware)
- Option GlobeTrotter Max 7.2 (new firmware)
- Option iCON 225
- Option iCON 452
- Option iCON 505

The device features a mass storage device referred to as "Zero-CD" which contains drivers for Microsoft Windows; this is the default mode for the device. The **uhso** driver automatically switches the device from "Zero-CD" mode to modem mode. This behavior can be disabled by setting *hw.usb.uhso.auto_switch* to 0 using sysctl(8).

FILES

/dev/cuaU?..?

EXAMPLES

Establishing a packet interface connection using the AT command interface available at one of the serial ports

```
AT+CGDCONT=1,"apn.provider"
```

```
AT_OWANCALL=1,1,1
```

```
OK
```

```
_OWANCALL=1,1
```

```
AT_OWANDATA=1
```

```
_OWANDATA: 1, 10.11.12.13, 0.0.0.0, 10.2.3.4, 10.2.3.5, \  
0.0.0.0, 0.0.0.0, 72000
```

Configuring the interface

```
ifconfig uhso0 10.11.12.13 up
```

```
route add default -interface uhso0
```

```
echo "nameserver 10.2.3.4" > /etc/resolv.conf
```

```
echo "nameserver 10.2.3.5" >> /etc/resolv.conf
```

The connection can be terminated with

```
AT_OWANCALL=1,0,1
```

SEE ALSO

uhsoctl(1), ucom(4), usb(4)

AUTHORS

The **uhso** driver was written by Fredrik Lindberg <*fli@shapeshifter.se*>.