

USER MANUAL
IDSL / RS-232 Modem
TAHOE 320

TAHOE
FREEDOM OF COMMUNICATION

1. Introduction

Tahoe 320 modem is an inexpensive solution allowing throughput up to 115.2 kbps, recommended for low-cost applications, yet providing reliable, high-quality connection.

It may be used to connect two PCs, automotive appliances or any other devices communicating through the RS-232 interface.

2. RS-232 interface

The RS-232 interface is equipped with a DB9 female connector and may be connected to a PC, router or any other device using standard external modem cable.

As the line transmission speed is the same as the throughput between the PC and the modem, no flow control is necessary. Nevertheless the RTS and CTS lines are tied together, so the modems will also work when the hardware flow control is turned on.

When the connection between two modems is lost, the CD (Carrier Detect) and DTR (Data Terminal Ready) lines are negated. This way the PC or router is notified, that the data cannot be transmitted.

3. IDSL interface

The IDSL interface is used to connect to the leased line. Two center pins of the RJ-11 should be used.

4. Modem configuration

Four DIP-switches located in the front panel are used to configure the modem.

The first one is used to select the modem type - Master or Slave. One of the modems should always be set to Master, while the other one should be set to Slave:

- ON** - Master
- OFF** - Slave

Three remaining switches are used to set the throughput:

| 2 | 3 | 4 | Throughput |
|-----|-----|-----|------------------|
| OFF | OFF | OFF | 115.2 kbps |
| ON | OFF | OFF | 57.6 kbps |
| OFF | ON | OFF | 38.4 kbps |
| ON | ON | OFF | 19.2 kbps |
| OFF | OFF | ON | 9.6 kbps |
| ON | OFF | ON | 4.8 kbps |
| OFF | ON | ON | 2.4 kbps |
| ON | ON | ON | Firmware upgrade |

The last setting is used to upload a new firmware through the RS-232 port.

The modem has to be rebooted (powered off and on) after any change to the DIP-switch settings.

5. LED signaling

5

The front panel LEDs signal the modem status:

- **Power** - lit after switching the power on
- **Sync** - signals the synchronization progress
- **Transmit**- blinks, when data is transmitted to the leased line
- **Receive** - blinks, when data is received from leased line

The Sync LED behaviour depends on the modem type. In the Slave modem it's meaning is simplified - it blinks, when the line is not synchronized and is lit constantly, when the two modems are connected.

In the Master modem it is off, when the leased line is disconnected or the remote modem is not present, blinks slowly (one time per second), when remote modem signal is detected, then blinks fast (3 times per second) in the last stage of the synchronization and is lit constantly, when the modems are fully synchronized.

6. Technical data

- throughput:
up to 115.2 kbps
- RS-232 interface:
connector: **female DB-9**
- IDSL interface:
connector: **RJ-11**
modulation: **2B1Q**
line speed: **160 kbps**
signal level: **13.5 dBm**
- dimensions:
100 mm (width) x 60 mm (length) x 30 mm (height)
- power supply:
7.5V, 200mA
external power supply included
- environmental conditions:
storage: temperature -20°C to 65°C
humidity 5 to 95%
operation: temperature 0°C to 40°C
humidity 0 to 85%

7. Declaration of Conformity

7



TAHOE
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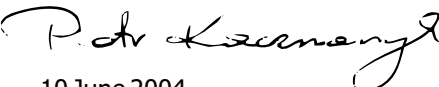
We declare that the product Tahoe 320 complies with the regulations of the following European Directives:

- **73/23/EEC** low voltage safety requirements
- **89/336/EEC** EMC requirements
- **99/5/EEC** radio & telecommunication terminal equipment requirements

The compliance of Tahoe 320 with the requirements of the above mentioned directives is ensured by complete application of the following harmonized European Standards:

- **EN 60950:2000**
- **EN 55022:1998**
- **EN 61000-6-1:2002**
- **EN 61000-6-3:2002**

Signed: Piotr Kaczmarzyk
Position: Director

Signature: 

Date: 10 June 2004
Place: Wrocław, Poland

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