



# ISDN USB Modem

## UI-1281

### User's Manual



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## **CE Mark Warning**

This is a Class B product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

## **Revision**

User's Manual for PLANET ISDN USB Modem

Model: UI-1281

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Part No. EM-UI1281

# Table of Contents

<b>CHAPTER 1 INTRODUCTION.....</b>	<b>1</b>
1.1 KEY FEATURES .....	1
1.2 PACKAGE CONTENT .....	1
1.3 VERIFYING YOUR SYSTEM REQUIREMENTS .....	1
1.4 GATHERING TOOLS AND DOCUMENTATIONS .....	2
1.5 FRONT PANEL AND LEDs.....	2
<b>CHAPTER 2 DRIVER INSTALLATION.....</b>	<b>4</b>
2.1 INSTALLING DRIVER TO WINDOWS 98/ME/2000 .....	4
2.2 INSTALLING DRIVER TO WINDOWS XP/SERVER 2003.....	8
2.3 UTILITY INSTALLATION .....	11
<b>CHAPTER 3 ISDN OPERATION .....</b>	<b>13</b>
3.1 MAKE A NEW CONNECTION .....	13
3.2 ISDN UTILITY .....	16
<b>CHAPTER 4 SPECIFICATIONS .....</b>	<b>18</b>
4.1 TECHNICAL SPECIFICATIONS .....	18
4.2 ENVIRONMENTAL INFORMATION .....	18
4.3 STANDARD CONFORMANCE .....	18
<b>APPENDIX A .....</b>	<b>19</b>

# Chapter 1 Introduction

The UI-1281 is a high performance ISDN terminal adapter with high speed 128Kbps transferring capability via USB interface. As like Planet's ISDN family, empower the connectivity to the ISDN networks with easy install, friendly interface for monitoring.

Using state of the art VLSI and digital signal processing technology, it can provide enhanced performance and reliability. This device also supports G3 14400bps fax and V.32bit 14400bps full duplex modem functions.

Experience blazing fast Internet access. Work at home, yet feel like you are in the office with UI-1281, a PC-based terminal adapter that takes full advantage of ISDN bandwidth.

## 1.1 Key Features

- MultiLink PPP combines two B-Channels into a single 128Kbps channel for fast Internet access
- Plug and Play
- Multiple Subscriber Number
- Run FAX CLASS1 compatible software package
- Run Hayes compatible software package
- CAPI 2.0 compatible
- Transmission Speed: ISDN- 64000 or 128000bps, Fax-14400bps, Modem-14400bps
- LED indicators monitor the status of ISDN line and USB cable
- Driver support Win98/Me/2000/XP/Server 2003

## 1.2 Package Content

Check that your package contains the following items:

- ✓ UI-1281 \* 1
- ✓ Drivers and User's Manual CD\* 1
- ✓ Quick Installation Guide \* 1
- ✓ USB Cable \* 1
- ✓ ISDN Line \* 1

Contact the place of purchase if an item is missing or damaged.

**Note:** Be sure to retain your proof of purchase, as it is required to receive warranty service.

## 1.3 Verifying Your System Requirements

Before installing the UI-1281, be sure your computer meets the following requirements:

### Hardware

- ✓ CPU: Pentium II or faster

- ✓ RAM: 64MB (Minimum)
- ✓ 25MB free space on disk
- ✓ One USB port (Type A- Female)

#### **Software**

- ✓ Microsoft Windows 98
- ✓ Microsoft Windows Me
- ✓ Microsoft Windows 2000
- ✓ Microsoft Windows XP
- ✓ Microsoft Windows Server 2003

#### **ISDN BRI Line**

Before running the UI-1281, you need to get an ISDN BRI (Basic Rate Interface) line from your local telephone company. Sometimes, your ISP may, upon your request, order an ISDN BRI line for you when you apply an ISDN Internet access account.

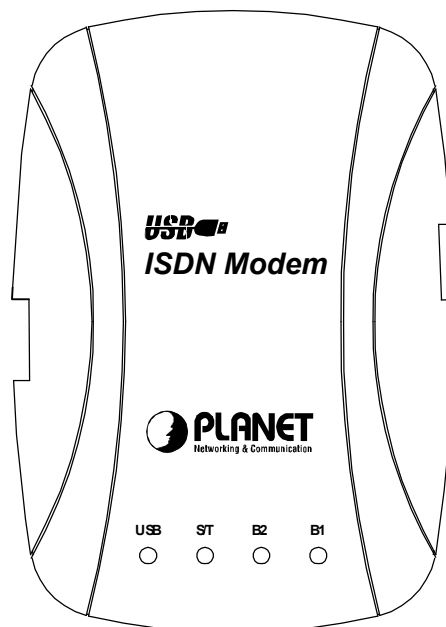
### **1.4 Gathering Tools And Documentations**

To install the modem, you need the following items:

- ✓ A suitable screw driver
- ✓ Your operating system documentation
- ✓ Your system unit documentation, including any service documentation

### **1.5 Front Panel And LEDs**

The faceplate of UI-1281 has 4 LEDs: USB, S/T, B2 and B1. The picture shows the faceplate of UI-1281 and the table explains the function and state of the LEDs.



LED	Color	Status	Function
USB	Red	On	Power ON
		Off	Power OFF
S/T	Red	On	ISDN is ready and dialing
		Off	ISDN is not ready
B2	Red	On	B Channel – 2 is working
		Off	B Channel – 2 is not work
B1	Red	On	B Channel – 1 is working
		Off	B Channel – 1 is not work

## Chapter 2 Driver Installation

After you setup your ISDN environment. Now, turn on your computer and start the driver installation. UI-1281 has support Microsoft Windows environments, please read the appropriate installation section for your PC system and ISDN devices. Before you begin the driver installation process, make sure you have the installation disks for your computer's operation system nearby.

### 2.1 Installing Driver To Windows 98/Me/2000

**Note: The following installation operates under Window 2000. Procedures will be similar to Window 98/Me. About Windows XP/Server 2003 driver installation, please refer to next section.**

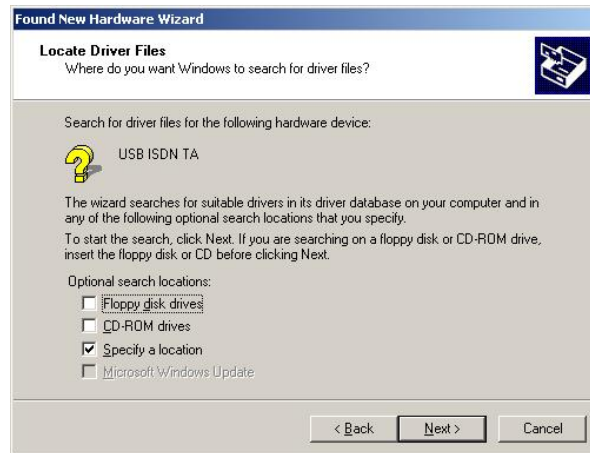
1. Plug UI-1281 into your PC's USB Port. Power on the PC and insert the Drivers and User's Manual CD into your CD-ROM drive.
2. Windows will automatically detect this modem and ask for the driver. Please click "Next".



3. Please select the first option and click "Next":



4. Select "Specify a location" and click "Next" to continue.



5. Please click "Browse" to find the driver location. (Assume "E" is your CD-ROM drive, the driver can be found in E:\Drivers), please click "Next" to continue.



6. Please press "Next" to continue.

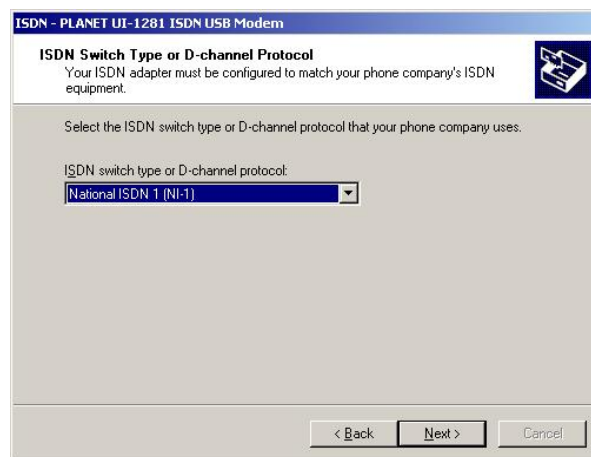




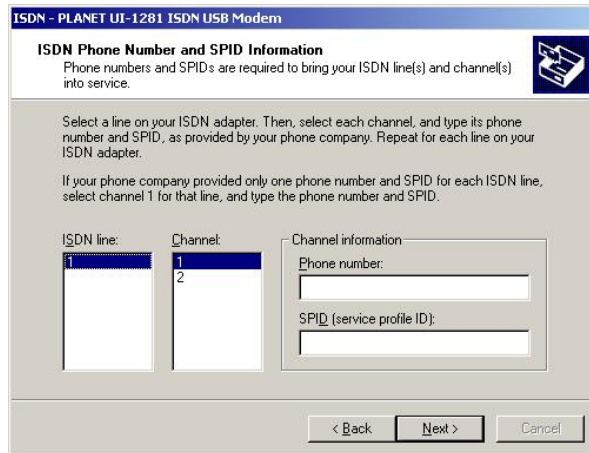
7. When Windows shows those screen, please click “Yes” to continue.



8. Choose the country name for your location or select an appropriate ISDN switch type in your country.



9. Please enter the Phone number and SPID that your phone company provided, and then click “Next” to continue. The SPID parameters only need to be setup for some US customers, please check with your telephone company if it is necessary. If you are not sure what the parameter you should enter, please keep them empty.



10. Please click "Finish" to complete the driver installation. In Win98/Me, installation will ask you to restart PC. After driver installed, utility installation will automatically start, please refer to Section 2.3 to install configuration utility.



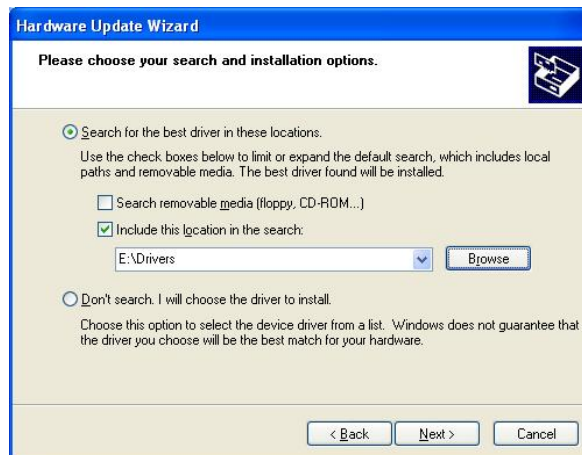
## 2.2 Installing Driver To Windows XP/Server 2003

**Note:** The following installation operates under Windows XP. Procedures will be similar for Windows Server 2003.

1. After installing UI-1281 into your PC and boot up, Windows XP will detect it and ask you to install driver. Please select the second option and click "Next".



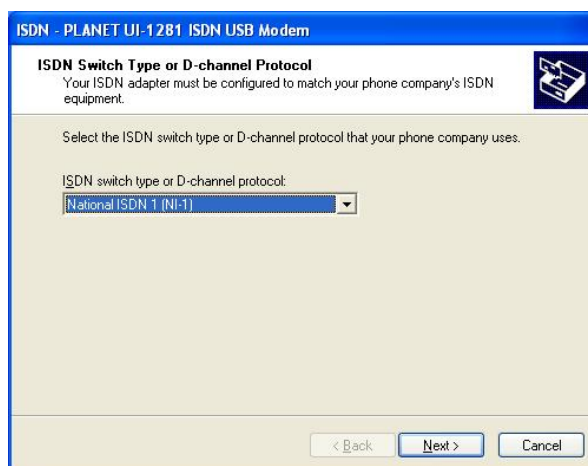
2. Please select "Include this location in the search" and then click "Browse" to find out the driver location to install. (Assume "E" is your CD-ROM drive, the driver can be found in E:\Drivers). Click "Next" to continue.



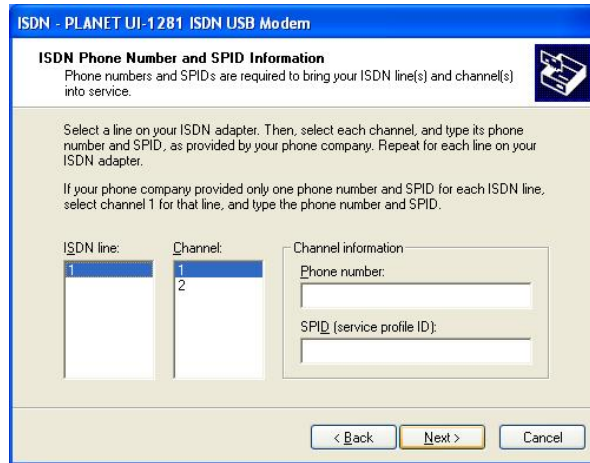
3. WinXP will show you those dialog box to prompt you the driver is not pass Windows Logo testing.  
Please don't worry about it, click "Continue Anyway", and then WinXP will start to install the driver.



4. Choose the country name for your location or select an appropriate ISDN switch type in your country.



5. Please enter the Phone number and SPID that your phone company provided, and then click “Next” to continue. The SPID parameters only need to be setup for some US customers, please check with your telephone company if it is necessary. If you are not sure what the parameter you should enter, please keep them empty.



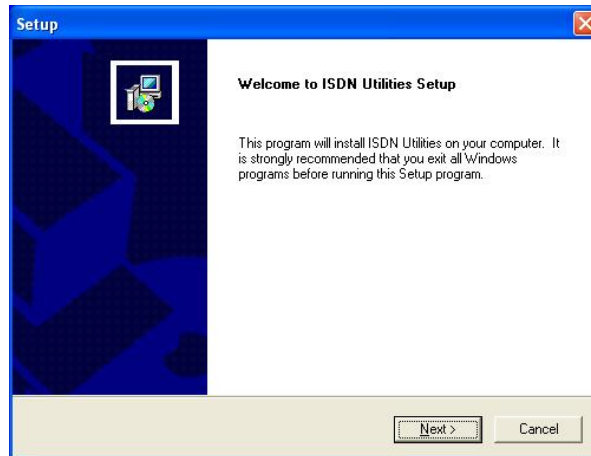
6. Please click “Finish” to complete the driver installation.



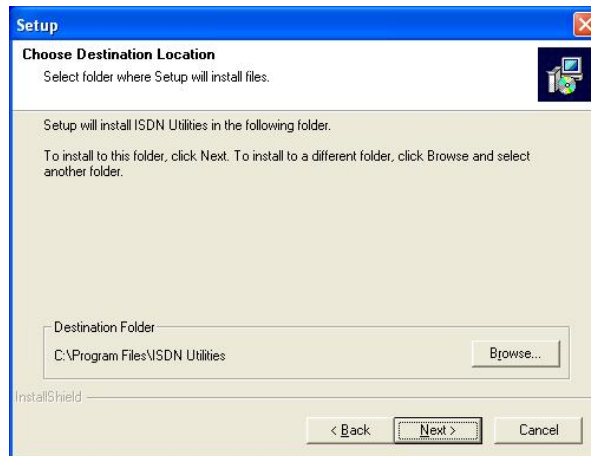
7. After driver installation completed. Utility installation will automatically start. Please refer to next Section to install the utility.

## 2.3 Utility Installation

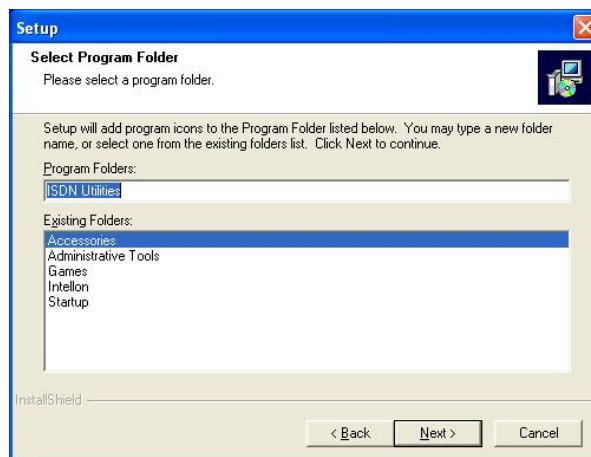
1. After driver installed, utility installation will auto start. Please click "Next" to continue.



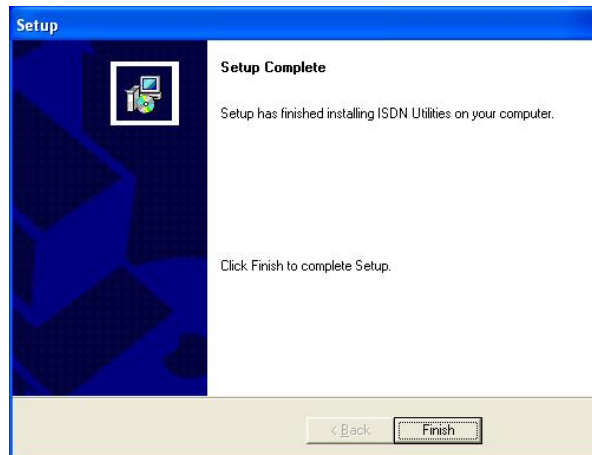
2. Please click "Yes" to continue or click "Browse" to specify a location to install ISDN utility.



3. You can change the Program Folder name as you wish or use the default name to continue. Please click "Next" for next step.



4. Please click "Finish" to complete the utility installation.



## Chapter 3 ISDN Operation

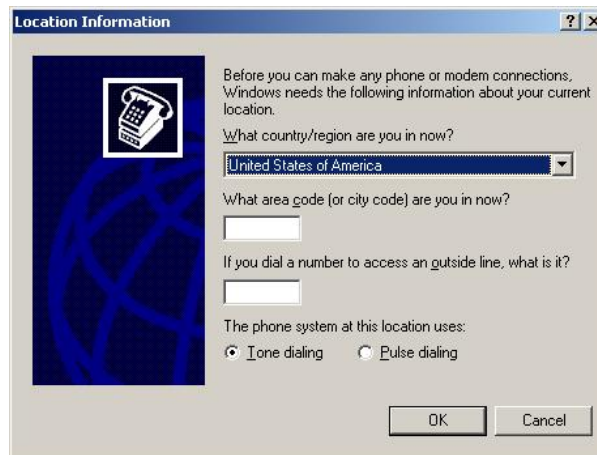
### 3.1 Make A New Connection

Please follow the steps below to create a new connection with the ISDN modem.

1. In My Computer => Control Panel => Network and Dial-Up Connections.
2. Please double click "Make New Connection". Then you can see the screen below.

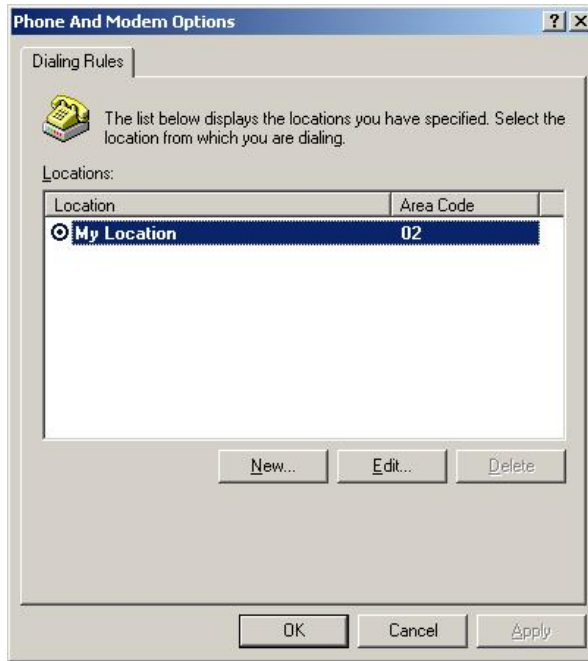


3. If this is the first time to make a new connection, Windows will show you this screen to ask your country, city code, the number for outside line and the phone system.

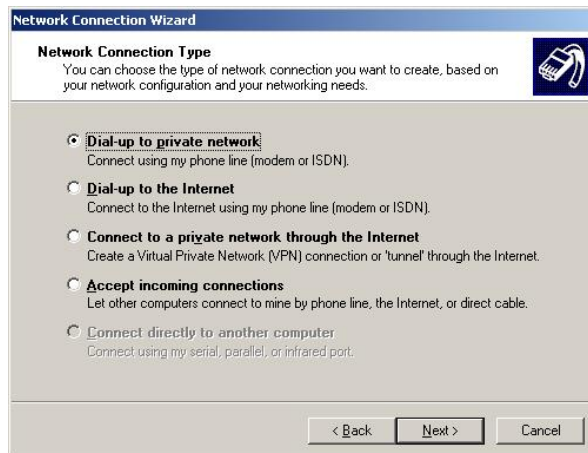


4. After the step above, Windows will create a new Dialing Rule to follow. Please click "OK".





- Please select "Dial to a private network" and click "Next" to continue.



- Please select "All available ISDN lines multi-linked". It will use all the ISDN device which available to connect at the same time.



7. Please type the phone number that your phone company provided to the field. The Dial Rule is disable In default. If you want to dial with the Dial Rule, please check “Use dialing rules”.

The screenshot shows the 'Phone Number to Dial' step of the Network Connection Wizard. The title bar reads 'Network Connection Wizard'. Below the title, the section is titled 'Phone Number to Dial' with a sub-header 'You must specify the phone number of the computer or network you want to connect to.' and a phone icon. The main text says: 'Type the phone number of the computer or network you are connecting to. If you want your computer to determine automatically how to dial from different locations, check Use dialing rules.' There are three input fields: 'Area code:' (a dropdown menu), 'Phone number:' (a text box), and 'Country/region code:' (a dropdown menu). Below these is a checkbox labeled 'Use dialing rules' which is currently unchecked. At the bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

8. Decide this connection will allow only you or all the users which login with different user name can use this connection.

The screenshot shows the 'Connection Availability' step of the Network Connection Wizard. The title bar reads 'Network Connection Wizard'. Below the title, the section is titled 'Connection Availability' with a sub-header 'You may make the new connection available to all users, or just yourself.' and a phone icon. The main text says: 'You may make this connection available to all users, or keep it only for your own use. A connection stored in your profile will not be available unless you are logged on.' There are two radio button options under 'Create this connection:': 'For all users' (which is selected) and 'Only for myself'. At the bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

9. Please type a name for this connection or use the default name to continue. Click “Finish” to complete.

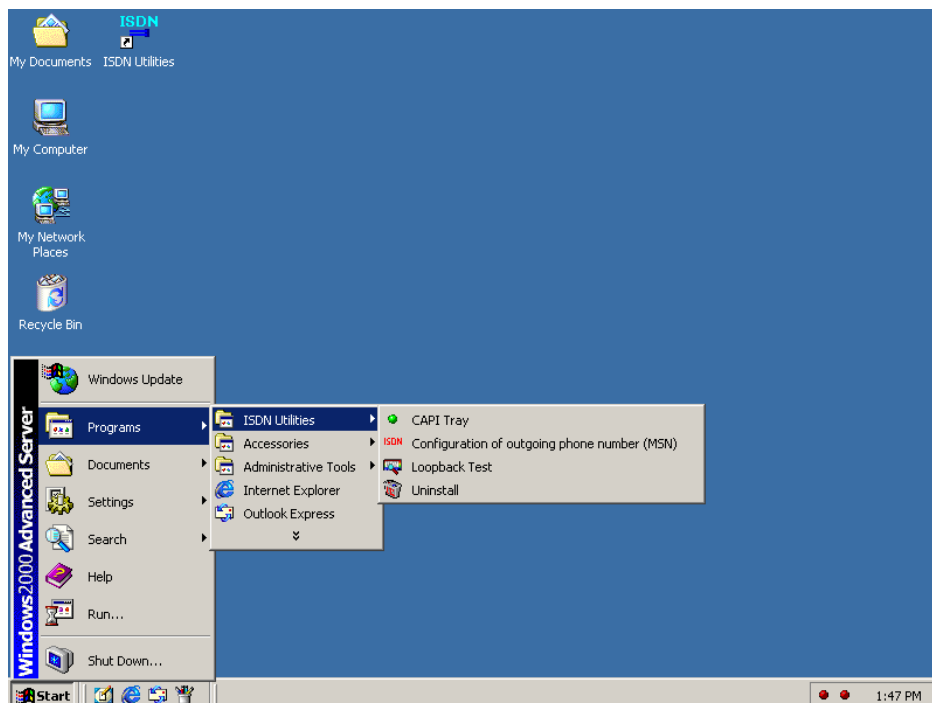
The screenshot shows the 'Completing the Network Connection Wizard' step. The title bar reads 'Network Connection Wizard'. On the left is a blue globe graphic with a phone icon. The main text says: 'Type the name you want to use for this connection:' followed by a text box containing 'Dial-up Connection'. Below this, it says: 'To create this connection and save it in the Network and Dial-up Connections folder, click Finish.' and 'To edit this connection in the Network and Dial-up Connections folder, select it, click File, and then click Properties.' There is a checkbox labeled 'Add a shortcut to my desktop' which is unchecked. At the bottom are three buttons: '< Back', 'Finish', and 'Cancel'.

10. When make the connection finished, the Dial-up Connection box will appear. Please enter User name and Password that your ISP provided and then click “Dial” to connect to Internet.



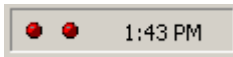
### 3.2 ISDN Utility

After the utility installed. It will create a shortcut on the desktop. You can double click this shortcut and select the utility to work. Or you can run the ISDN Utility in Start => Programs => ISDN Utilities. There will be four programs in this folder as below.

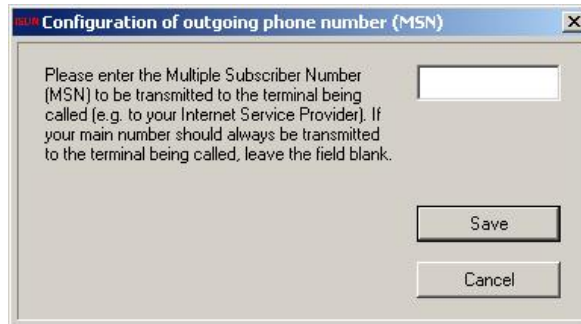


### 3.2.1 CAPI Tray

After PC restarts, the CAPI Tray will auto run and shows in the system tray. It will show you the ISDN connection status. When the ISDN connection is establish, the indicator will turn into green.

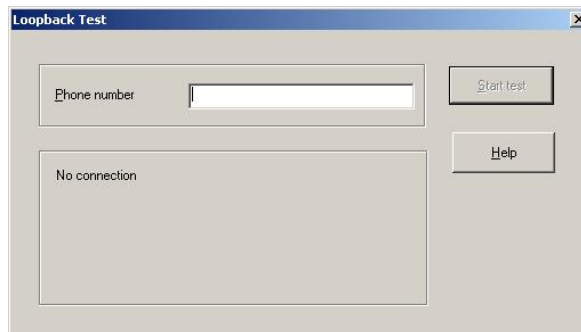


### 3.2.2 Configuration of outgoing phone number (MSN)



MSN parameter is used for ISDN switches supporting MSN (Multiple Subscriber Number) service. MSN service is supported by some European telephone companies. If you enter the number here then the called telephone number of incoming call will be required to match the MSN value.

### 3.2.3 Loopback Test



If you can not connect to Internet, you can check your ISDN line status in this program. Please enter the ISP phone number and click "Start test". Wait for a while, it will show you the message about test result.

### 3.2.4 Uninstall

When you want to uninstall the ISDN utility, please run this program for uninstall.

## Chapter 4 Specifications

### 4.1 Technical Specifications

<b>ISDN Standards</b>	DSS1 (Euro-ISDN), INS Net64 (Japan NTT)
<b>ISDN Interface</b>	S/T interface; ITU-T 1.430
<b>B-Channel Protocol</b>	MultiLink PPP / 128Kbps PPP asynchronous-to-synchronous HDLC transparent FAX G3 ITU-T V.17/V.29/V.27ter/V.21 channel 2 ITU-T V.32bis/V.32/v.22bis with V.42 error correction
<b>Connectors</b>	USB Type-B (Female) * 1 RJ-11 * 1
<b>USB Interface</b>	USB 1.1 Compliant
<b>LEDs</b>	USB, S/T, B2, B1
<b>Command set</b>	AT Command set FAX CLASS1 Command set CAPI 2.0 Compatible
<b>Speed</b>	10/100/1000 Mbps at Half duplex mode 20/200/2000 Mbps at Full duplex mode

### 4.2 Environmental Information

<b>Dimensions</b>	110mm x 76mm x 22mm (L x H x W)
<b>Weight</b>	85 g
<b>Operating temperature</b>	0 ~ 55 °C
<b>Storage temperature</b>	-10 ~ 70°C
<b>Operating humidity</b>	10 ~ 90% relative humidity, non-condensing
<b>Storage humidity</b>	0 ~ 90% relative humidity, non-condensing

### 4.3 Standard Conformance

<b>EMC Certification</b>	CE
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## Appendix A

### ✓ **Why ISDN?**

The ISDN (Integrated Services Digital Network) is the standard for carrying both data and voice simultaneously. ISDN BRI (Basic Rate Interface) line provides two B-channels for voice or data transmission, and each B-Channel can provide data transmission of up to 64 Kbps. The ISDN network uses the same transmission lines as the existing analog telephone network, but using a digital signal and higher bandwidth between the central office (phone company) and the customer. Aside from four times faster than a standard 28.8 Kbps modem, ISDN also provides an extremely reliable and stable digital connection.

The ISDN network can set up a connection in about 3 seconds. This is much quicker than the PSTN network. This feature alone can result in great timesavings in the longer term.

### ✓ **Why High Speed Analog Modems Can Not Compete With ISDN Digital Connections?**

“The high speed modem can run at 28.8 Kbps and will move data at ISDN-type speeds when you consider data compression”. This assumes a noise-free telephone line and that the data is easily compressed. Unfortunately, many image files cannot be compressed easily, and many telephone lines are far from ideal. ISDN always operates at its rated speed. Of course, ISDN cards can also use data compression technology to multiply its raw data transmission speed.

Telephone monopolies allowing, ISDN will inevitably replace the existing analog telephone network. The conversion is being driven by applications such as telecommuting, home-working, remote LAN access, video conferencing and access to the Internet. Today, ISDN is available almost everywhere so all users can should be able to get the benefits from ISDN now.

### ✓ **What is SPID?**

Acronym for **S**ervice **P**rofile **I**dentifier, a number that identifies a specific ISDN line. When you obtain ISDN service, your telephone company assigns a SPID to your line. Part of the initialization procedure is to configure your ISDN terminal adapter to use this SPID. Most telephone companies in the U.S. use the *Generic SPID Format*, which is a 14-digit number. The first 10 digits identify the telephone number, called the *Directory Number (DN)*. The remaining four digits identify a particular ISDN device, in the case where multiple devices share the same Directory Number.

### ✓ **What is MSN?**

One of the big advantages of ISDN over an analogue service is the ability to assign multiple phone numbers to one line. In Europe (and other countries using the EuroISDN specification) this is implemented using **M**ultiple **S**ubscriber **N**umbering.

The MSN service is provided to you by your ISDN service provider. It allows you to have several phone numbers for your ISDN line. For example, your PTT might give you a range of numbers like 810 3500, 810 3501,? 810 3509.

The use of MSN allows you to assign different numbers to the various features (virtual devices) that your DIVA product can provide. For instance, you could have an analogue fax modem on one number (810 3502), a Dial-Up Networking connection to a RAS Server on another number (810 3500), etc.

According to the Euro-ISDN specification, the numbers do not have to be in sequence. Therefore, some providers will allocate non-contiguous MSN numbers like 810 3500, 810 3632, 810 4592, 810 7653 etc.