

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

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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
	Red	On	Power ON
036	Reu	Off	Power OFF
елт	Pod	On	ISDN is ready and dialing
5/1	Reu	Off	ISDN is not ready
ı د م	Red	On	B Channel – 2 is working
DZ		Off	B Channel – 2 is not work
D1	Pod	On	B Channel – 1 is working
	кеа	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.

Found Ne	w Hardware Wizard	×
	Insert the manufacturer's installation disk into the drive selected, and then click OK.	OK
		Cancel
	Copy manufacturer's files from:	
	E:\Drivers	Browse

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.

Your ISDN adapter must be o equipment.	nnel Protocol configured to match your phone company's ISDN
Select the ISDN switch type	or D-channel protocol that your phone company uses.
ISDN switch type or D-chann	nel protocol:
National ISDN 1 (NI-1)	

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.

	10011	
number and SF ISDN adapter	PID, as provided by	r. Then, select each channel, and type its phone your phone company. Repeat for each line on your
If your phone of	company provided o	nly one phone number and SPID for each ISDN line,
select channel	1 for that line, and	type the phone number and SPID.
I <u>S</u> DN line:	<u>C</u> hannel:	Channel information
	2	Phone number:
		SPID (service profile ID):

 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.

Found New Hardware Wizard	
	Completing the Found New Hardware Wizard PLANET UI-1281 ISDN USB Modem Windows has finished installing the software for this device. To close this wizard, click Finish.
	< <u>B</u> ack Finish Cancel

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".



 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.

 Search for the best driver in Use the check boxes below paths and removable media Search removable <u>m</u> Include this location 	n these locations. to limit or expand the default search, which includes local . The best driver found will be installed. edia (floppy, CD-ROM) is the search:
Use the check boxes below paths and removable media Search removable <u>m</u> V Include this l <u>o</u> cation	w to limit or expand the default search, which includes local a. The best driver found will be installed. edia (floppy, CD-ROM)
Search removable <u>m</u>	edia (floppy, CD-ROM)
Include this location	is the second
	IT THE SEALURE
E:\Drivers	Browse
O Don't search. I will choose	the driver to install.
Choose this option to selec	t the device driver from a list. Windows does not guarantee the best match for your hardware.
the driver you choose will b	e the best match for your hardware.

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.

	ire Installation
1	The software you are installing for this hardware: PLANET UI-1281 ISDN USB Modem has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why this testing is important.</u>) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Hardwa	Continue Anyway STOP Installation
1	The software you are installing for this hardware:
	ISDN USB Modem WAN Driver has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why this testing is important.</u>)
	ISDN USB Modem WAN Driver has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why this testing is important.</u>) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.

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

I protocol that your phone company uses.

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.

into service.		
Select a line or number and SF	n your ISDN adapter. PID, as provided by y	. Then, select each channel, and type its phone your phone company. Repeat for each line on your
ISDN adapter.		
select channel	ompany provided or 1 for that line, and ty	ype the phone number and SPID for each ISDN line, ype the phone number and SPID.
ISDN line:	Channel	- Channel information
1		Phone number:
	2	
		SPID (service profile ID):

6. Please click "Finish" to complete the driver installation.

Completing the Found New Hardware Wizard The wizard has finished installing the software for: PLANET UI-1281 ISDN USB Modem
Click Finish to close the wizard.

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.

Setup	
1	Welcome to ISDN Utilities Setup
	This program will install ISDN Utilities on your computer. It is strongly recommended that you exit all Windows programs before running this Setup program.
	Cancel

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

Setup	
Choose Destination Location Select folder where Setup will install files.	10
Setup will install ISDN Utilities in the following folder.	
To install to this folder, click Next. To install to a different folder, click Brov another folder.	vse and select
Destination Folder C:\Program Files\ISDN Utilities	Browse
InstallShield	> Cancel

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

Setup	
Select Program Folder Please select a program folder.	Ĩ¢
Setup will add program icons to the Program Fo name, or select one from the existing folders list Program Folders: [ISDN Unities]	Ider listed below. You may type a new folder . Click Next to continue.
Existing Folders: Administrative Tools Games Intellon Startup	
InstallShield	< <u>Back N</u> ext > Cancel

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

Setup	
1	Setup Complete Setup has finished installing ISDN Utilities on your computer.
	Click Finish to complete Setup.
	< <u>B</u> ack Finish

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.

Location Information		<u>?</u> ×
	Before you can make any phone or modem conn Windows needs the following information about y location. What country/region are you in now?	ections, our current
	United States of America	•
K	What area gode (or city code) are you in now?	at is it?
	The phone system at this location uses:	
	ОК	Cancel

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

one And Modem Opt	ions		?
Dialing Rules			
The list below location from v	displays the location: vhich you are dialing.	s you have specified. S	elect the
Locations:		Area Code	
☑ My Location		02	
	<u>N</u> ew	Edit	lete

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

Yo	u can choose the type of network connection you want to create, based on ur network configuration and your networking needs.
6	Dial-up to grivate network
_	Connect using my priorie line (modern or ISDIN).
	Dial-up to the Internet Connect to the Internet using my phone line (modem or ISDN).
C	Connect to a private network through the Internet Create a Virtual Private Network (VPN) connection or 'tunnel' through the Internet.
C	Accept incoming connections Let other computers connect to mine by phone line, the Internet, or direct cable.
C	Connect directly to another computer Connect using my serial, parallel, or infrared port.

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

Select a Device		A
I his is the device that will be used to i	nake the connection.	A
You have more than one dial-up devic	e on your computer.	
Select the devices to use in this conne	ection:	
🗹 💷 All available ISDN lines multi-lin	nked	
🗆 🎒 ISDN: channel - USB ISDN A	dapter WAN Driver	
🗆 💭 🎒 ISDN: channel - USB ISDN A	dapter WAN Driver	

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".

Phone Number to Dial You must specify the phor connect to.	ne number of the compu	uter or networ	k you want to	
Type the phone number o your computer to determin dialing rules.	i the computer or netwo e automatically how to o	rk you are co dial from differ	nnecting to. If y ent locations, c	iou want heck Use
Area code:	Phone number:			
 			¥	
☐ <u>U</u> se dialing rules				
		Pask [Neuts	Canaal

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

work Connection Wizard			
Connection Availability You may make the new connection avai	lable to all users, or	just yourself.	E
You may make this connection available connection stored in your profile will not b	to all users, or keep be available unless	o it only for your o you are logged o	own use. A n.
Create this connection:			
 Eor all users 			
O Only for myself			
	< <u>B</u> ack	Next>	Cancel

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

Network Connection Wizard	
Ĩ	Completing the Network Connection Wizard Iype the name you want to use for this connection: Dialup Connection To create this connection and save it in the Network and Dialup Connections folder, click Finish. To edit this connection in the Network and Dialup
W-	Connections folder, select it, click File, and then click Properties.
	< <u>B</u> ack Finish 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.

Connect Dial-up	o Connection			<u>?</u> ×
]	A	2	2
<u>U</u> ser name: <u>P</u> assword:	□ Save pas	sword		
Djal:				•
Dial	Cancel	Properties		

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)

Please enter the Multiple Subscriber Number (MSN) to be transmitted to the terminal being called (e.g. to your Internet Service Provider). If your main number should always be transmitted to the terminal being called. Jeave the field blank.	1
	Save

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

Phone number	I	<u>Start test</u>
		Help
No connection		

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

ISDN Standards	DSS1 (Euro-ISDN), INS Net64 (Japan NTT)	
ISDN Interface	S/T interface; ITU-T 1.430	
B-Channel Protocol	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	
Connectors	USB Type-B (Female) * 1	
	RJ-11 * 1	
USB Interface	USB 1.1 Compliant	
LEDs	USB, S/T, B2, B1	
Command set	AT Command set	
	FAX CLASS1 Command set	
	CAPI 2.0 Compatible	
Speed	10/100/1000 Mbps at Half duplex mode	
	20/200/2000 Mbps at Full duplex mode	

4.1 Technical Specifications

4.2 Environmental Information

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

4.3 Standard Conformance

EMC Certification	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 *Service Profile Identifier*, 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 Multiple Subscriber Numbering.

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.

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