Lucent Technologies
Bell Labs Innovations

ISDN DEFINITY® Extender
Models 2300EU and 2100EU

Quick Installation Guide

Support Telephone Numbers

If you need assistance when installing, programming, or using your system, contact your Lucent Technologies representative.

Installing the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Switch Module

Pre-Installation Checklist:

❑ Ensure your ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Kit includes the following items:
   ❑ The ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Switch Module
   ❑ The ISDN DEFINITY® Extender, Models 2300EU and 2100EU, System Administrator Manual
   ❑ The ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Quick Installation and Reference Guide
   ❑ 220V or 240Vac adapter
   ❑ RJ45 cable
❑ Ensure the maximum length of your cable between the DEFINITY® ECS and the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Switch Module does not exceed 150 metres (500 feet).

⚠ **CAUTION:**
Do not connect a digital telephone to a ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Switch Module.
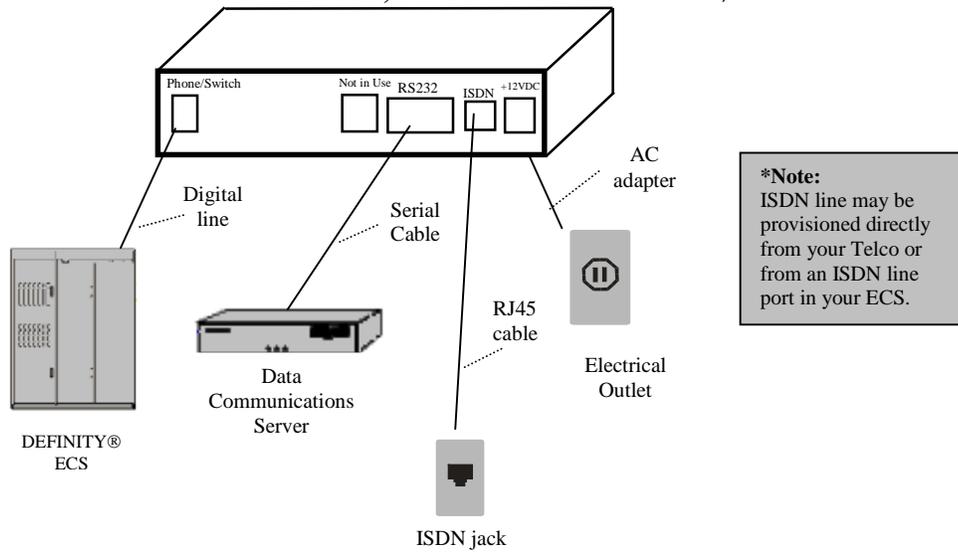
Installation Procedure:

All connections to the Switch Module are done via the back panel.

1. Connect the ISDN BRI line from your ECS or a central office line to the ISDN jack of the Switch module at the on-premise location. Use the RJ45 cable, included with the system.

2. Connect the Switch Module *PHONE/SWITCH* jack to the 2-wire digital port on your DEFINITY® ECS using a standard phone cable.

3. Connect your PC or Data Communications Server to the *RS-232* jack on your Switch Module using a straight through RS-232 serial cable. You may need an adapter if your equipment does not have a 9-pin connector.

4. Connect the AC adapter to an electrical outlet. Use only the AC adapters provided with the ISDN DEFINITY® Extender, Models 2300EU and 2100EU. The ISDN DEFINITY® Extender, Models 2300EU and 2100EU, has been designed to operate from 220V or 240Vac.

After a series of flashing LED sequences, the Switch Module LED will blink a series of yellow, green, green. This LED sequence confirms that the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Switch Module is installed correctly.

5. If applicable, administer the ISDN BRI and station ports on your ECS as required.

    - If the Switch Module is connected to an ISDN BRI port from your DEFINITY® ECS, you should administer your incoming PRI to route data calls that are destined for the Switch Module.
    - Administer the station port as you would any other digital port station.

ISDN DEFINITY® Extender, Models 2300EU and 2100EU,– Switch Module

Phone/Switch   Not in Use   RS232   ISDN   +12VDC

Digital line

Serial Cable

AC adapter

RJ45 cable

*Note: ISDN line may be provisioned directly from your Telco or from an ISDN line port in your ECS.

Data Communications Server

DEFINITY® ECS

Electrical Outlet

ISDN jack

Configuring the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Switch Module

Pre-Configuration Checklist

❑ Ensure that the installation procedure for the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Switch Module has been completed, and all cables are connected correctly. Please refer to the previous page for a diagram that illustrates the installation procedure of the Switch Module.

Configuration Procedure

To use the basic operation of the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, you must program the ISDN parameters.

1. To access the configuration menu for the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Switch Module, you must connect a terminal or PC to the RS-232 port of the Switch Module. The PC must be running a terminal emulation package. Configure your terminal or terminal application to 9600bps, No parity, 8 data bits, and 1 stop bit. The terminal type should be set to VT100.

2. Unplug the Switch Module, and plug it back in after waiting a few seconds. When the Switch Module is powered-up, the LED will start a 6 second period of very fast red blinks, followed by 3 green blinks, and 1 red blink. Following the red blink, the LED will blink 3 sets of 8 yellow flashes.

3. Type the word *"MENU"* from your PC or terminal while the LED blinks its first set of 8 yellow flashes, described above. The Configuration menu will appear.

4. Select *ISDN Parameters* to enter the ISDN parameters menu. The following sub-menus appear:

   ▪ Set Switch type
   ▪ DN1
   ▪ DN2
   ▪ Clear DNs
   ▪ TEI: Auto

   For more information about these sub-menus, please refer to the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, System Administrator's Manual.

5. Select *Configure System* to access the following sub-menus:
   ▪ Passwords
   ▪ COM Port Settings
   ▪ Show Settings
   ▪ Software Upgrade*

   For more information about these sub-menus, please refer to the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, System Administrator's Manual.

6. Select *COM port Settings* menu item to set the COM port parameters to enable data access. You need to make sure that your Data Rate, Parity, Data Bits, and Stop Bits match that of your Remote Module. Those settings should also match your Data Communications Server and your remote PC or terminal.

Installing the ISDN DEFINITY® Extender, Models 2301EU and 2101EU, Remote Module

Pre-Installation Checklist:

❑ Ensure your ISDN DEFINITY® Extender, Models 2301EU and 2101EU, System Kit includes the following items:
- ❑ The ISDN DEFINITY® Extender, Models 2301EU and 2101EU, Remote Module
- ❑ The ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Quick Installation and Reference Guide
- ❑ AC adapter
- ❑ RJ45 cable

❑ Ensure your digital telephone is located within 120 metres (400 feet) of the ISDN DEFINITY® Extender, Models 2301EU and 2101EU.

⚠ CAUTION:
Do not connect a digital port to an ISDN DEFINITY® Extender, Models 2301EU and 2101EU, Remote Module.
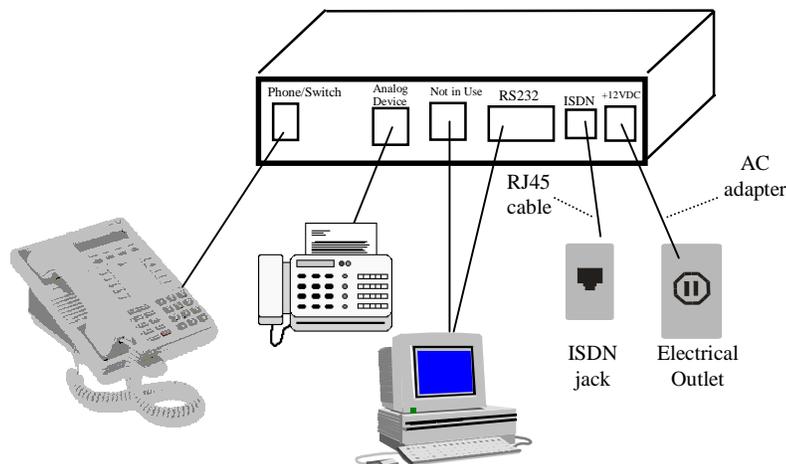
Installation Procedure:

All connections to the Remote Module are done via the back panel.

1. Connect the ISDN jack on the Remote Module to your ISDN jack using the RJ45 cable that comes with the kit.

2. Connect the digital telephone to the PHONE/SWITCH jack of the Remote Module.

3. Connect your Personal Computer or data terminal to the RS-232 port on the Remote Module if you are using your ISDN DEFINITY® Extender, Models 2301EU and 2101EU, for data access. A 9-pin straight through serial cable will work for many Personal Computers, but you may need an adapter if your equipment does not have a 9-pin connector.

4. Connect the AC adapter to an electrical outlet. Use only the AC adapters provided with the ISDN DEFINITY® Extender, Models 2301EU and 2101EU. The ISDN DEFINITY® Extender, Models 2301EU and 2101EU, has been designed to operate from 220V or 240Vac.

   After a series of flashing LED sequences, the display on the digital telephone will initialize, and read *Go Online*? Once you're at the *Go Online?* prompt, the LED sequences on the Remote Module should be yellow, green, green.

ISDN DEFINITY® Extender, Models 2301EU and 2101EU – Remote Module

Configuring the ISDN DEFINITY® Extender, Models 2301EU and 2101EU, Remote Module

Pre-Configuration Checklist:

❑ Ensure that the Installation procedure has been completed, and all cables are connected correctly. Please refer to the previous page for a diagram that illustrates the Installation procedure.

Configuration Procedure:

Configure the ISDN DEFINITY® Extender, Models 2301EU and 2101EU, by pressing **1** (Previous), **2** (Ok), **3** (Next), or **Drop/Redial** (Accept) on the keypad of the remote telephone. The digital telephone will display messages that will easily guide you through the various menus of the ISDN DEFINITY Extender, Models 2301EU and 2101EU, configuration procedure.

1. Program the PBX phone number from the *Set Dial numbers?* menu on the digital telephone. This is the Switch Module's DN1, and will be used for the Remote Module to *Go Online,* and connect to the Switch Module.

2. Program the remote phone number from the *Set Dial numbers?* menu if you plan to use the ISDN DEFINITY® Extender, Models 2301EU and 2101EU's COD or Dialback features. The remote phone number should be set to the Remote Module's PTT line phone number. It should be set exactly as needed for the Switch Module to reach the Remote Module. If your Switch Modules are connected behind your DEFINITY® ECS, do not forget to begin the phone number with a "9/ARS code."

3. Call On Demand (COD) can reduce long distance line costs by establishing a connection only when a call is detected, or when there is activity on the remote phone.

   Dialback enables the Switch Module to disconnect, and then dial back to the Remote Module after a connection has been successfully completed. This feature can reduce line charges incurred by your ISDN DEFINITY® Extender, Models 2301EU and 2101EU, Remote Module.

4. Set the REM COM port settings if you are using your ISDN DEFINITY® Extender, Models 2301EU and 2101EU, for simultaneous data access. The Remote Module and the Switch Module COM port data settings must match so that communication is possible between the two modules. The following COM port data settings must match: **data rate**, **data bits**, **parity**, and **stop bits**. Your COM port setting for your Remote and Switch Modules must also match those of your PC and your Terminal Server or Remote Access Server.

   To Go Online:
5. Connect your Remote Module to your Switch Module:
   1. Press **1** or **Prv** key until you return to the *Go Online?* prompt.
   2. Press **2** or **Ok** to initiate the connection.
   The PBX phone number is dialed, and the modules connect. You will be prompted for a password. Enter the password, and press **Drop** or **Redial** key.
   You are now connected to the DEFINITY® ECS, and can use your remote phone as if your were in the office.

6. Disconnect the Remote Module from the Switch Module:
   1. Press the **Hold** key four times.
   Disconnect? menu will appear.
   2. Press **2** or **Ok** to initiate the disconnection.

If you encounter any error messages while configuring the ISDN DEFINITY® Extender, Models 2301EU and 2101EU, please refer to the *Error Messages* section in this Guide for a detailed description of suggested actions to take.

Troubleshooting the ISDN DEFINITY® Extender, Models 2300EU and 2100EU

The Troubleshooting section includes information for the Switch Module and Remote Module, and aids in troubleshooting efforts from either location.

There are a variety of reasons why errors may occur during transmission or connection. Whenever you encounter a problem, there are some general areas you should check first:

❒ Ensure the AC power adapter is connected to the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Remote Module.

❒ Ensure all interconnecting cables and connections to wiring blocks are secure and properly seated.

❒ Ensure you are using the Remote Module at the remote site and the Switch Module at the switch site.

❒ Verify the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, LEDs are flashing.

❒ Eliminate potential causes of interference.

❒ Check the error message on the telephone.

❒ Verify the ISDN parameters and Dial Numbers.

If…	Then…
No Remote Site Phone Display	❒ Ensure you have a Remote Module, and not a Switch Module.
	❒ Ensure the AC power adapter is connected to the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, Remote Module, and the LED is lit.
	❒ Ensure the phone is functioning correctly.
	❒ Ensure the installation has not been moved, or any new wiring done.
No Switch Module Connection	❒ Ensure the correct dial numbers have been programmed into the Remote Module.
	❒ Ensure the AC power adapter is connected to the Switch Module, and all interconnecting cables are properly seated.
	❒ Ensure you have a Switch Module at the Switch site, and not a Remote Module.
	❒ Ensure your Remote & Switch Modules have the correct ISDN parameters.
No Indicator Lights At Power Up	❒ Ensure the AC power adapter is connected to the ISDN DEFINITY® Extender, Models 2300EU and 2100EU, module.
	❒ Ensure the AC power outlet is working. Check it with some other electrical device.
	❒ The module may not be operational.
	❒ Call Customer Service.
Switch Module Will Not Answer	❒ Someone in the office could be using the port, and is unaware you are trying to connect. Wait for a short period, then try to connect again.
	❒ Ensure you entered the correct PBX dial number (your Switch Module DN1 number).