

ISDN

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Version 1.0

Purpose This document is part of the user's guide to the installation and configuration of Bintec gateways running software release 7.1.4 or later. For up-to-the-minute information and instructions concerning the latest software release, you should always read our **Release Notes**, especially when carrying out a software update to a later release level. The latest **Release Notes** can be found at www.bintec.net.

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Guidelines and standards Bintec gateways comply with the following guidelines and standards:

R&TTE Directive 1999/5/EG

CE marking for all EU countries and Switzerland

You will find detailed information in the Declarations of Conformity at www.bintec.net.

How to reach Bintec

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1 ISDN Menu

The fields of the *ISDN S0* menu are described below.

| | |
|--|--|
| VPN Access 25 Setup Tool | Bintec Access Networks GmbH |
| [SLOT 0 UNIT 4 ISDN BRI]: Configure ISDN | |
| Basic Rate Interface | MyGateway |
| Result of autoconfiguration ISDN Switch | EURO ISDN, point to multipoint Typeautodetect on bootup |
| D-Channel | dialup |
| B-Channel 1 | dialup |
| B-Channel 2 | dialup |
| Incoming Call Answering > | |
| SAVE | CANCEL |

This menu is for configuring the BRI of your gateway. Here you enter data such as the type of ISDN connection to which your gateway is connected.



Note

The devices of the **VPN Access** series are equipped with different interfaces. See datasheet on www.bintec.net to check whether your gateway has a BRI, or see user's guide part **Technical Data**.

You can use the BRI of your gateway for both dialup and leased lines over ISDN.

The **ISDN S0** menu consists of the following fields:

| Field | Description |
|------------------------------|--|
| Result of autoconfiguration: | <p>Status of ISDN autoconfiguration. Automatic >> D-channel detection runs until a setting is found or until the ISDN protocol is selected manually under ISDN SWITCH TYPE. The field cannot be modified.</p> <p>Possible values:</p> <ul style="list-style-type: none"> ■ <i>Euro ISDN point to point</i>: “ISDN Switch Type” on page 5 ■ <i>Euro ISDN point to multipoint</i>: “ISDN Switch Type” on page 5 ■ <i>autoconfiguration disabled</i>: manual setting of ISDN SWITCH TYPE. ■ <i>running</i>: detection is still in process. |

| Field | Description |
|------------------|---|
| ISDN Switch Type | <p>Defines the ISDN >> protocol supplied by your ISDN provider. The following settings are possible:</p> <ul style="list-style-type: none"> ■ <i>autodetect on bootup</i>: automatic D-channel detection for dialup connections (default setting) ■ <i>Euro ISDN point to multipoint</i>: Euro ISDN for point-to-multipoint ■ <i>Euro ISDN point to point</i>: Euro ISDN for point-to-point ■ <i>National ISDN 1 AT&T NI1, EWSD NI1</i>: U.S. BRI type ■ <i>AT&T 5ESS Custom ISDN point to multipoint</i>: U.S. BRI type ■ <i>AT&T 5ESS Custom ISDN point to point</i>: U.S. BRI type ■ <i>National ISDN 1 Northern Telecom DMS100</i>: U.S. BRI type ■ <i>Japan NTT INS64</i>: japanese BRI type ■ <i>none</i>: ISDN interface is not used. ■ <i>leased line B1 channel (64S)</i>: leased line over B-channel 1 (64 kbps) |

| Field | Description |
|-----------------------------|---|
| ISDN Switch Type (cont.) | <ul style="list-style-type: none"> ■ <i>leased line B1+B2 channel (64S2)</i>: leased line over both B-channels (128 kbps) ■ <i>leased line D+B1+B2 channel (TS02)</i>: leased line over D-channel and both B-channels (144 kbps) ■ <i>leased line B1+B2 different endpoints (digital 64S with dual connection)</i>: leased line to two different endpoints. |
| D-Channel | <p>D-channel configuration. The display of options depends on the value selected in ISDN SWITCH TYPE. Possible values:</p> <ul style="list-style-type: none"> ■ <i>leased dte</i> ■ <i>leased dce</i> ■ <i>dialup</i> (default value) ■ <i>not used</i> |
| B-Channel 1 | <p>Configuration of first >>> B-channel. The display of options depends on the value selected in ISDN SWITCH TYPE. Possible values:</p> <ul style="list-style-type: none"> ■ <i>dialup</i> (default setting): for dialup connections ■ <i>not used</i>: NOT for dialup connections ■ <i>leased dte</i>: for leased lines ■ <i>leased dce</i>: for leased lines |
| B-Channel 2 | <p>Configuration of second B-channel. The display of options depends on the value selected in ISDN SWITCH TYPE. Possible values: “B-Channel 1” on page 6</p> |

| Field | Description |
|--|---|
| SPID B-Channel 1+2 or SPID B-Channel 1 or SPID B-Channel 2 | (only valid for ISDN protocols in the USA) SPID = Service Profile Identifier Is only shown if ISDN SWITCH TYPE = <i>AT&T 5ESS Custom ISDN multipoint</i> or <i>AT&T 5ESS Custom ISDN point to point</i> or <i>National ISDN1 AT&T n11</i> , <i>EWSD NI1</i> resp. <i>National ISDN1 Northern Telecom DMS100 A</i> . Here you enter the service ID for B-channel 1 and 2, which you obtain from your provider. This consists of: number + SPID (depends on provider) |

Table 1-1: **ISDN** menu fields



Note

For a leased line or if the ISDN protocol is not detected, the **ISDN SWITCH TYPE** can be entered manually. The automatic D-channel detection is then switched off.

An incorrectly set ISDN protocol prevents ISDN connections being set up!

In most cases, you can accept the preset values for **D-CHANNEL**, **B-CHANNEL 1** and **B-CHANNEL 2**.

If you use an ISDN leased line and have requested a special service from your service provider, it may be necessary to set the local side of the leased line at this point (DTE or DCE). You must then ensure that the far end has set the other value. You must also set **D-CHANNEL**, **B-CHANNEL 1** and **B-CHANNEL 2** to the same values, if you have selected several D-/B-channels under **ISDN SWITCH TYPE** and the values can be changed.

The menu **ISDNS0** leads to the submenu **INCOMING CALL ANSWERING**.

When **ISDN SWITCH TYPE** = *National ISDN1 Northern Telecom DMS100* the sub-menus **INCOMING CALL ANSWERING B1** and **INCOMING CALL ANSWERING B2** are displayed.

2 Submenu Incoming Call Answering

The **INCOMING CALL ANSWERING** submenu is described below.

| | | | |
|---|------|-----------------------------|--------|
| VPN Access 25 Setup Tool | | Bintec Access Networks GmbH | |
| [SLOT 0 UNIT 4 ISDN BRI] [INCOMING] [ADD] | | MyGateway | |
| Item | | PPP (routing) | |
| Number | | | |
| Mode | | right to left | |
| Bearer | | any | |
| | SAVE | | CANCEL |

The **ISDN SO → INCOMING CALL ANSWERING → ADD/EDIT** submenu is for assigning the available ISDN numbers to the desired services (e.g. PPP routing, **PPP ISDN Login**).

If you use the BRI for incoming and outgoing dialup connections, you must enter the own numbers for this interface (these settings are not possible for leased lines). The gateway distributes the incoming calls to the internal services according to the settings in this menu. Outgoing calls include the own number as calling party number.

The gateway supports the following services:

- **PPP (Routing):**
The **PPP (routing)** service is the gateway's general routing service. This connects e.g. ISDN-WAN partners' data connections to your **LAN**. This enables partners outside your own local network to access hosts within your LAN. This subsystem also enables outgoing data connections to be set up to ISDN-WAN partners.
- **ISDN Login:**
The **ISDN Login** service allows incoming data connections with ac-

cess to the >> **SNMP shell** of the **VPN Access** gateway as well as outgoing data connections to other Bintec gateways. This means the gateway can be configured and administrated remotely.

- The >> **CAPI** service allows connection of incoming and outgoing data and voice calls to communications applications on hosts in the LAN that access the >> **Remote CAPI** interface of your gateway. This enables, for example, hosts connected to your gateway to receive and send faxes. To be able to use CAPI applications from the hosts in the LAN with your gateway, you must also carry out the Remote CAPI configuration on the individual hosts in addition to distributing the extension numbers as described in this chapter.

When a call is received, the gateway first checks the called party number (CPN) and the type of call (data or voice call). The CPN is the extension the partner has dialed to reach the gateway. The call is then forwarded to the corresponding service.

**Note**

All incoming calls that do not match any of the existing entries, are transmitted to the CAPI service.

**Note**

If no settings have been made (ex works state), all incoming calls via ISDN are accepted by the ISDN-login service. To avoid this it is recommended to adjust the required settings of this menu.

If **ISDN SWITCH TYPE National ISDN 1 Northern Telecom DMS100** is set, two options appear in this field: **INCOMING CALL ANSWERING B1** and **INCOMING CALL ANSWERING B2**.

The **INCOMING CALL ANSWERING** → **ADD/EDIT** menu consists of the following fields:

| Field | Description |
|--------|---|
| Item | Service to which a call to the NUMBER below is to be assigned. Possible values: see table “Selection options for Item field,” on page 12. |
| Number | Phone number which is used to verify the called party number. It is sufficient, that only single figures of the entry match considering MODE . |
| Mode | Mode in which your gateway compares the digits of NUMBER with the called party number of the incoming call: <ul style="list-style-type: none"> ■ <i>right to left</i> (default value) ■ <i>left to right (DDI)</i>: Always select if your gateway is connected to a point-to-point connection. |
| Bearer | Type of incoming call (service identification). Possible values: <ul style="list-style-type: none"> ■ <i>data</i>: Data call ■ <i>voice</i>: Voice call (modem, voice, analog fax) ■ <i>any</i>: both data and voice calls (default value) |

Table 2-1: Fields in submenu **INCOMING CALL ANSWERING**

The **ITEM** field contains the following selection options:

| Description | Meaning |
|----------------------------------|--|
| PPP (routing) (default value) | Default setting for >> PPP routing. Includes the automatic detection of the PPP connections listed below except <i>PPP DOVB</i> . |
| ISDN Login | Enables logging in with >> ISDN Login . |
| PPP 64k | Enables 64 kbps PPP data connections. |
| PPP DOVB | Data transmission Over Voice Bearer - useful in the USA, for example, where voice connections are sometimes cheaper than data connections. DOVB contains an automatic bandwidth modification from 64 kbps to 56 kbps. This function depends on the type of device. Ask the Bintec Support (contact via www.bintec.net) if DOVB can be used with your gateway. |
| PPP V.110 (1200...38400) | Permits PPP connections to V.110 at bit rates of 1200 bps, 2400 bps, ..., 38400 bps. |
| PPP V.120 | Permits incoming PPP connections to V.120. |
| IPSec | Enables a number to be defined for IPSec call-back. |

Table 2-2: Selection options for **ITEM** field

Index: ISDN

| | | |
|----------|-----------------------------|-------|
| B | B-channel 1 | 6 |
| | B-channel 2 | 6 |
| | Bearer | 11 |
| | BRI | 3 |
| D | D-channel | 6 |
| I | IPSec | 12 |
| | ISDN Login | 9, 12 |
| | ISDN switch type | 5, 6 |
| | Item | 11 |
| L | leased dte, dce | 6 |
| | Leased line | 5 |
| M | Mode | 11 |
| N | Number | 11 |
| P | Point to multipoint | 5 |
| | Point to point | 5 |
| | PPP (routing) | 9, 12 |
| | PPP DOVB | 12 |
| R | Result of autoconfiguration | 4 |
| S | SPID B-channel 1 | 7 |
| | SPID B-channel 1+2 | 7 |
| | SPID B-channel 2 | 7 |

