



Topic / Issue: Configuring ISDN Settings on Quadro PBX

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This document describes the configuration of the ISDN settings for Quadro PBX with ISDN interfaces and inbound ISDN call routing.

To configure ISDN Trunk(s) go to Telephony > ISDN Settings to view the ISDN Trunks.

The screenshot shows the 'ISDN Trunk Settings' page with a navigation menu at the top: Main, System, Users, Telephony, Internet Uplink, Network. Below the title are links: Start, Stop, Restart, Copy to Trunk(s), Restore Default Settings, Select all, Inverse Selection. A table lists three trunks, each with a checkbox, a hyperlink, and a 'Stats' link.

	Trunks	Interface Type	Connection Type	Stats
<input type="checkbox"/>	Trunk 1	User	PTMP (Point To Multi Point)	ISDN Stats
<input type="checkbox"/>	Trunk 2	User	PTMP (Point To Multi Point)	ISDN Stats
<input type="checkbox"/>	Trunk 3	User	PTMP (Point To Multi Point)	ISDN Stats

Back

The screenshot shows the 'ISDN Wizard' configuration page. It includes a 'Trunk' field set to '1', an 'Interface Type' dropdown menu set to 'User', and a 'Connection Type' section with two radio button options: 'PTP (Point To Point)' and 'PTMP (Point To Multi Point)'. The PTMP option is selected.

Select a Trunk by clicking on its hyperlink. Leave the Interface Type set to User (default). Leave the Connection Type as Point to Multi Point (PTMP). PTMP is supported by standard Australian carriers.

ISDN Wizard

ISDN PTMP Settings

Trunk : 1

Service Type

<input type="radio"/>	MSN
<input checked="" type="radio"/>	No MSN

If you want the Quadro to route the incoming call to a specific destination based on the dialed number, there are 2 options for configuration. Both options are covered in this document.

Option 1: No MSN (Multiple Subscriber Number) - By selecting No MSN you will need to configure the Call Routing Table (CRT) to route inbound calls to different destinations based on the number that the caller dialed (see CRT configuration below). This option gives the maximum flexibility for inbound call routing.

Main System Users Telephony Internet Uplink Network

ISDN Wizard

Routing Settings

Trunk : 1

Route Incoming Call to

Use Default outgoing Caller ID

Default outgoing Caller ID

Advanced Settings

Route incoming calls to 'Routing with inbound destination number'. This will allow use of multiple Direct Inward Dial (DID) numbers.

If all inbound calls go to the same destination e.g. receptionist or IVR menu, you can select the extension number from the 'Route Incoming Call to' drop-down box. This will not require any configuration of the CRT.

Enable Advanced Settings.

If 'Use Default Outgoing Caller ID' is enabled then the Default outgoing MSN setting takes priority over any other "Modify Caller ID" setting in call routing configuration.

When "Use Default outgoing MSN" is enabled:

A blank entry = Hide Caller ID.

A valid number for this ISDN service = number as entered

An invalid number entry = Default MSN number as configured at the exchange.

When "Use Default outgoing MSN" is NOT enabled:

Caller ID can be controlled via the "Modify Caller ID" parameter on outbound call route entries.

Selecting Advanced Settings will allow changes to be made to the Layer 2 & Layer 3 settings.

ISDN Wizard

L2 & L3 Settings

Trunk: 1

Excessive Ack. Delay T200 (500...9999) msec.
Idle Timer T203 (1000...99999) msec.
T302 Timer (0...15000) msec.
T309 Timer (0...90000) msec.
T310 Timer (1000...120000) msec.
Alert Guard Timeout (0...500) msec.
Coding Type

Passive Mode

Enable TEI Remove Procedure

Switch Type

Channel Selection

Bearer Establishment Procedure

Called Party Type of Number

Calling Party Type of Number

Called Party Numbering Plan

Calling Party Numbering Plan

Incoming Called Digits Size

(0...255)

Generate Progress Tone to IP

Generate Progress Tone to PSTN/PBX

Enable CLIR Service

Alternative Disconnection Mode

B1 Channel

B2 Channel

If Passive mode is not enabled then you may see the link toggle between up and down in the event log. But during a call the ISDN will be OK.

Advise Passive Mode.

Cancel

Help

- Set switch type to basic_net3
- Alternative Disconnection Mode may be disabled to allow faster detection of remote PSTN hang up.

[Main](#)
[System](#)
[Users](#)
[Telephony](#)
[Internet Uplink](#)
[Network](#)

ISDN Trunk Settings

[Start](#)
[Stop](#)
[Restart](#)
[Copy to Trunk\(s\)](#)
[Restore Default Settings](#)
[Select all](#)
[Inverse Selection](#)

	Trunks	Interface Type	Connection Type	Stats
<input type="checkbox"/>	Trunk 1	User	PTMP (Point To Multi Point)	ISDN Stats
<input type="checkbox"/>	Trunk 2	User	PTMP (Point To Multi Point)	ISDN Stats
<input type="checkbox"/>	Trunk 3	User	PTMP (Point To Multi Point)	ISDN Stats

Select the ISDN stats Hyperlink on the right to verify ISDN connection

- Link should report as **Up**
- Frame Synch should be **Yes**
- ISDN BRI Layer 2 should be **Established**

ISDN Status - Trunk 1

Link	Frame Synch.
Up	Yes

HDLC Receive :	10190	HDLC Transmit :	9548
HDLC CRC Error :	408	HDLC Octet Count :	486
HDLC Packet Abort :	55393		

ISDN BRI Layer 2

TEI Value:	69
L2 State:	MultiFrameEstablish

CRT configuration (for Option 1: No MSN)

Main System Users **Telephony** Internet Uplink

Call Routing Wizard

Routing Call Type - Add Entry

Pattern:

Number of Discarded Symbols:

Prefix:

Suffix:

Call Type:

Metric:

Description:

Open the CRT and click on Add to add an entry. Set the pattern as the DID phone number. Depending on the ISDN provider Area Code may be required (typically not required).

If the extension number corresponds with the last *2 digits of the DID (e.g. phone number 95612345 will be routed to extension 45) discard 6 symbols and set the Call Type as PBX. Click Next.

Alternatively, if the extension number does not correspond with the last 2 digits of the DID e.g. phone number 95612386 will be routed to extension 46) discard all symbols (8) and prefix with the destination extension number (45).

* This assumes the Quadro is using a 2-digit extension numbering scheme.

Main System Users **Telephony** Internet Uplink **Network**

Call Routing Table

	ID	State	Pattern	Pattern Modification	Call Settings	Fail Reason	Local Authentication	Inbound Pattern/Modification	Inbound Settings	DT	UES / URP	Metric	Description
	1	Enabled	000		ISDN trunk: Any Port(User)	None	No	*	PBX			10	Emergency Call
	2	Enabled	9?*	NDS: 1	ISDN trunk: Any Port(User)	Any	No	*	PBX			10	Make PSTN Call
<input type="checkbox"/>	3	Enabled	95612345	NDS: 6	PBX	None	No					10	ext 45 DID
<input type="checkbox"/>	4	Enabled	95611286	NDS: 8 Prefix: 46	PBX	None	No					10	ext 46 DID

Option 2: MSN

If you want to route inbound calls to different destinations based on the MSN number that the caller dialed, you can use the MSN table to do that. You can also use this option to route DID numbers.

This will give the same result as Option 1 but requires less configuration as you do not need to add entries to the CRT.

However you are limited in the MSN table to 16 entries per ISDN trunk. As MSN numbers are bound to an ISDN service, you would have to duplicate the MSN table across all ISDN Trunks when using this to configure DID numbers if you need the DID's to be available across multiple ISDN services connected to the PBX.

In that scenario there is a limitation of 16 DID's that can be configured on a single PBX. If you want to use more than 16 DID's use option 1.

NOTE: Advanced Settings (L2 & L3) and Default Outgoing Caller ID Settings are the same for both options. For Option 2 (MSN) these settings are on the MSN Table page.

MSN Number(s)	Route Incoming Call to
595612346	45
95612386	46

Summary:

(If required)

Covers Configuration of ISDN Trunks on Quadro PBX with ISDN interfaces and routing of inbound calls.