

Trunk and Inbound Call Routing configuration for ISDN Quadro models

This document explains how to configure a Quadro to use an ISDN In-dial range for incoming call routing.

The number of ISDN trunks available will depend on the model of Quadro. 2xi/4xi models have one (Trunk 0). Quadro 4xi3/16xi models have three (Trunks 0, 1, 2). This document is based on a Quadro 4xi3.

Set the correct parameters on each of the trunks. Select ISDN from the Telephony menu. Tick the box next to a Trunk and Edit.

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ISDN Trunk Settings

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

	Trunks	Interface Type	DDI ▼	Stats
<input checked="" type="checkbox"/>	Trunk0	User	No	ISDN Stats
<input type="checkbox"/>	Trunk1	User	No	ISDN Stats
<input type="checkbox"/>	Trunk2	User	No	ISDN Stats

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Set the parameters as shown in the screenshot.

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Trunk - 0 Edit Entry

Interface Type
User ▼

Coding Type
a-law ▼

LoopBackMode
No_loopback ▼

☐ Passive Mode

Save
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Configure the first Trunk (0). Direct In-Dial numbers will be routed directly to an extension, based on the dialed number. Select Trunk 0 and click Settings. This opens the ISDN Wizard. Configure settings of page 1 as shown below.

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ISDN Wizard

DDI (Direct Dialing Inward)

Selected Trunk(s): 0

☐ Enable DDI Service

TEI Mode

☐ Automat

☒ TEI Assignment on Power up

☒ Non Automat

TEI Address(0..63)

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Use the settings shown in the screenshot from page one of the ISDN Wizard (left).

Configure the settings as shown on page 2 of the ISDN Wizard (right). From the drop-down list select 'Routing with inbound destination number'.

This will mean all incoming calls are sent to the Call Routing Table where they will be routed to the correct extension based on the dialed number.

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ISDN Wizard

MSN Settings

Selected Trunk(s): 0

☒ No other devices connected to ISDN bus

Route Incoming Call to

☐ Other devices connected to ISDN bus

[MSN Service](#)

☒ Use Default outgoing MSN

Default outgoing MSN

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Configure the L2 & L3 settings as shown below in page 3 of the ISDN Wizard.

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ISDN Wizard

L2 & L3 Settings

Selected Trunk(s): 0

ISDN L2 Timers	
Excessive Ack. Delay T200	<input type="text" value="4000"/> (500...9999) msec.
Idle Timer T203	<input type="text" value="10000"/> (1000...99999) msec.

ISDN L3 Timers	
T302 Timer	<input type="text" value="4000"/> (0...15000) msec.
T309 Timer	<input type="text" value="0"/> (0...90000) msec.
T310 Timer	<input type="text" value="60000"/> (1000...120000) msec.
Alert Guard Timeout	<input type="text" value="150"/> (0...500) msec.

Switch Type	<input type="text" value="basic_dss1"/>
Channel Selection	<input type="text" value="exclusive"/>
Bearer Establishment Procedure	<input type="text" value="on call acceptance"/>
Called Party Type of Number	<input type="text" value="Unknown"/>
Calling Party Type of Number	<input type="text" value="Unknown"/>
Called Party Numbering Plan	<input type="text" value="ISDN/telephony numbering plan"/>
Calling Party Numbering Plan	<input type="text" value="ISDN/telephony numbering plan"/>
Incoming Called Digits Size	<input type="text" value="0"/> (0...255)

☐ Generate Progress Tone to IP

☒ Enable CLIR Service

☒ Alternative Disconnection Mode

☒ B1 Channel

☒ B2 Channel

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ISDN Wizard

Summary result of ISDN BRI Settings

Selected Trunk(s): 0

DDI (Direct Dialing Inward)

Enable DDI Service No

TEI mode Non Automat

TEI Address(0..63) 0

MSN Settings

Route Incoming Call to Routing with inbound destination number

Use Default outgoing MSN Yes

Default outgoing MSN

Protocol Settings

B1 Channel	Enabled
B2 Channel	Enabled
Generate Progress Tone to IP	Disabled
Alternative Disconnection Mode	Enabled
Enable CLIR Service	Enabled
Switch Type	basic_dss1
Channel Selection	exclusive
Bearer Establishment Procedure	on call acceptance
Called Party Type of Number	Unknown
Calling Party Type of Number	Unknown
Called Party Numbering Plan	ISDN/telephony numbering plan
Calling Party Numbering Plan	ISDN/telephony numbering plan
Incoming Called Digits Size	0
Excessive Ack. Delay T200	4000 msec.
Idle Timer T203	10000 msec.
T302 Timer	4000 msec.
T309 Timer	0 msec.
T310 Timer	60000 msec.
Alert Guard Timeout	150 msec.

Check the settings in the Summary page then press Finish to complete the configuration and initiate the Trunk.

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ISDN Status - Trunk 0

Link	Frame Synch.
Up	Yes

HDLC Receive :	475798	HDLC Transmit :	475799
HDLC CRC Error :	0	HDLC Octet Count :	0
HDLC Packet Abort :	0		

ISDN BRI Layer 2

TEI Value:	0
L2 State:	MultiFrameEstablish


By selecting Settings for Trunk 0 in the ISDN Trunk Settings page, you can check to see if the Trunk is connected and you have Frame Synch.

If this is not the case, some settings may have been incorrectly configured.

If you have more than one ISDN service connected, configure the additional trunks in the same way as Trunk 0

Next configure the Call Routing Table (CRT) to route incoming calls to the correct extension. From the Telephony menu select Call Routing then click on Call Routing Table. 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). If the extension number corresponds with the last 2 digits of the DID (e.g. phone number 95558715 will be routed to extension 15) discard 6 symbols and set the Call Type as PBX. Click Next.

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Call Routing Wizard

Routing Call Type - Edit Entry

Pattern: (wildcard supported) ☐ Require Authorization for Enabling/Disabling

Number of Discarded Symbols: Enabler Key:

Prefix: Disabler Key:

Suffix:

Call Type: ▼

Metric:

Description:

☐ Filter on Caller / Call Type / Modify Caller ID

☐ Set Date/Time Period(s)

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Alternatively, if the extension number does not correspond with the last 2 digits of the DID (e.g. phone number 95558715 will be routed to extension 45) discard all symbols and prefix with the destination extension number).

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Call Routing Wizard

Summary - Edit Entry

Routing Call Type

Pattern: 95558715*
Number of Discarded Symbols: 6
Prefix:
Suffix:
Call Type: PBX
Metric: 10
Description: DID

Routing Call Settings

AAA Required: AAA disabled.
Fail Reason: None

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Finish

Step through page 2 of the wizard, leaving settings default.

In the summary page, check settings and click Finish to create the call route. Repeat the process for other DID numbers that will be routed directly to extensions.

In the CRT you can see the entries that have been created. Entries 9 & 10 are used where the last 2 digits of the DID number match the extension number that the call should be routed to.

Entries 11 and 12 are for extensions where the last 2 digits of the DID number are different to the extension number that they should be routed to. In this case, strip off all digits of the DID and prefix with the number of the extension they should be routed to.

Entry 13 is a failover route which will be used when a DID for an extension that does not exist on the system is dialed. In this example, all digits are stripped off and 00 is prefixed to send the call to an Auto Attendant.

<input type="checkbox"/>	9	Enabled	95558715	6		PBX				No		None
<input type="checkbox"/>	10	Enabled	95558716	6		PBX				No		None
<input type="checkbox"/>	11	Enabled	95558717	8	31	PBX				No		None
<input type="checkbox"/>	12	Enabled	95558718	8	32	PBX				No		None
<input type="checkbox"/>	13	Enabled	955587*	8	00	PBX				No		None